The Builder.

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Malvern College New Chapel: Interior.—Sir Arthur Blomfield, A.R.A., F.R.I.B.A., Architect ..... *Double-Page Photo-Litho.*
New Buildings for Uppingham School.—Mr. T. G. Jackson, R.A., Architect ..... *Double-Page Photo-Litho.*
Decoration of a Chapel in Marble, Mosaic, and Painting.—Professor Aitchison, R.A., P.R.I.B.A., Architect ..... *Double-Page Ink-Photo.*

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Architecture at the Royal Academy.

THE architectural room at the Academy is not at its best this year. It is a curious mixture of various classes of work, many of the exhibits being very small and in some cases very rough sketches, occasionally in a very eccentric style, and some of them certainly not worth exhibiting. The absence of plans and the predominance of mere pictures of buildings is more marked than ever, and so far from there being any progress in the direction of the full and technical illustration of a design by geometrical drawings, the tendency seems rather the other way. There are, however, three models placed in the room, and we are always glad to welcome this element in architectural illustration, and wish these were present in larger proportion.

The largest and most important of the models is a "sketch model" in plaster, but sufficiently finished for its purpose, of the south-west angle of Mr. Mountford's Museum and Technical School now in progress at Liverpool; and as a perspective view of the building is hung within a few feet of the model, one can compare the impression produced by the two. The model shows a part of the side elevation near the angle of the building, with the commencement of the curve of the end elevation. It shows the position and effect of the sculpture in the side pediment, and of the semi-domed niche under it, and the rusticated work on the piers which flank the end pavilion of the side elevation. We observe that while the pediment is shown with a curved finish, a segmental line, on the drawing, on the model it is shown as an angular pediment. As the model was made since the drawing, we presume this is the final decision, but we rather doubt whether it is an improvement, the more so as the curve (on plan) of the end of the building rather seems to call for the curved line of the pediment, as a matter of harmony of general treatment. In one respect the model is a useful commentary on the drawing, showing how a feature which looks satisfactory on a drawing may present a different aspect when it comes to be modelled in the round. The upper part of the piers flanking the pavilion is formed by four columns broken by very bold rustication formed by projecting block courses which run round the three sides of the group of columns. In the drawing this looks very well, but as it works out in the model the columns seem too far from each other, back to front, for this kind of treatment, and the masses of stone which produce the rustication are so long, from column to column, as to produce rather the appearance of a kind of stone framework to hold the structure together. At the front, where the intercolumniation is less, it is all right, but at the sides the columns are overpowered by the rustication blocks, which have almost the proportion of so many lintels. We should recommend a little modification in this respect, to prevent this portion looking like a stone cage. In other respects the model looks very well, and shows a gratifying boldness in the character of the detail.

The other two models are much smaller, and both show complete buildings. One is a model for "a Westmoreland church" by Mr. John Hawes, and is, if we remember right, a representation in this form of one of the designs submitted for a prize offered by the Architectural Association a little while since. If so, it shows a very commendable spirit on the part of the author to have worked out his design in this form for exhibition at the Academy. The design is of a very simple, almost rude character, with plain buttresses battering as they go up, and plain, round-headed windows at the sides, within a recessed segmental wall-arch abutting against the sides of the buttresses. Some sculptured figures over the west door form the only ornament. The church is supposed to be built on a declivity which is duly shown on the model, and which influences the treatment of the design. The texture and colour of the model indicate very well the character of the rough walling supposed to be used. Altogether this is a very creditable piece of work. The other model, showing a house called "Rowallan," at Haslemere, by Messrs. Read & MacDonald, is rather too much like a toy. The real value of a model, generally speaking, is to show a part of the detail of a building in the round on a pretty large scale, so that its effect and projection can be estimated; a little model of the whole is chiefly valuable to amuse the public. The house is one in L shape, with the entrance at the re-entering angle; a quadrant colonnade porch is introduced across the angle with pretty effect. A plan of the house is added, showing that the dining room has large windows facing south and west, the two worst aspects for a dining-room in summer, though they are unobjectionable in winter. It is curious how constantly this question of the aspect of sitting rooms is overlooked in house-planning.

Coming to the drawings, it is difficult to select any as being especially the most powerful drawings in the room, but we may suitably take the works of the Academicians first. The works of each exhibitor, where he he has more than one, are as far as possible grouped, or at least placed near each other, and Mr. Jackson's three contributions are placed together at the end of the room. These are the New Schools at Oxford (his diploma drawing) the chapel at Giggleswick School, and the new buildings for Uppingham School (Nos. 1,646, 1,647, and 1,648). The first named represents a building which is already well known as a piece of very refined work of the modern Free Classic school, or the variety of Classic which has become a favourite in recent days, for it is not so much a modern school as a revival, except in regard to a few details. It is a satisfactory drawing to look at, not only for the architectural refinement of the building represented, but for the fine artistic character of the drawing, which does not show the over-careful and wrought-up work of the professional draughtsman, but is a very free piece of pen-and-ink drawing. The additions to Uppingham School are illustrated in the present number, a view of the schoolroom designed by Street being included in the drawing, and we may congratulate the architect on his success in contriving to give his own character to the new buildings, while at the same time keeping them sufficiently in harmony with Street's work. It will be observed that the flank of the new building which faces the schoolroom is treated in a manner more decidedly Gothic than the other portions, as if the building paid a little compliment here to the work of the older architect to which it is contiguous at this point. Mr. Jackson's third work, the chapel for Giggleswick School, is more original and more out of his usual style of design than the other

two. The central feature is a leaded octagon cupola, divided from the wall by a small and perhaps rather inadequate cornice; the walls which support the cupola are treated with a slight batter which aids in giving a special character to this portion of the design. The bays of the substructure which buttress the cupola are treated with gables with a sharply-pitched rake on each side, leading up to a gable in reversed curves; this is also characteristic but not very graceful in effect. In the wall of one bay is a large traceried window, in the other one which comes into the view there is a very deep central buttress as well as side ones of the same depth; these three great slices of wall side by side do not produce a very good effect. A plan, if one had been given, might have shown a reason for this difference in treatment, and for the central buttress on one of the bays; but none of the three drawings have plans of any kind attached to them. We wish Academy architects would set a better example in this respect; it is they especially who ought to do so, and to make a stand against this system of illustrating architecture by pictures of the outside of a building only, with no indication of its structure or of the working out of plan and elevation in combination.

Another school chapel is shown by another Academy architect, Sir A. Blomfield, who exhibits a fine drawing, made by Mr. Paul, of the interior of the new chapel at Malvern College (1702); of this also we publish an illustration in the present number, to which me may refer the reader; it is orthodox Late Gothic and presents nothing for special comment. Professor Aitchison exhibits a drawing of the decoration of a chapel in marble mosaic, and painting (1604), shown in two sections and a small plan; our illustration gives the lines and general effect of the design, unfortunately only in monochrome. The materials used are described in the paragraph under the head of "Illustrations." The general result of the distribution of material is to give a rather heavy and rich colour to the lower portion, supporting a light and playful treatment in the dome, which will thus be lifted and lightened in effect. The effect of the colour combination is rich and harmonious, the only thing that strikes us as a little harsh is the strong horizontal banding of light and dark on each side of the window, which seems rather too strong for the rest of the work, but in actual execution it may not appear so. Mr. Bodley exhibits an external view of the chapel at Allerton Church, Leeds (1712) and a design for a pulpit at St. Michael's Croydon (1714). Mr. Waterhouse and Mr. Norman Shaw do not exhibit this year.

The largest drawing in the room is Mr. H. Wilson's huge sketch in crayon of the baldacchino and rearrangement of chancel now in progress at St. Bartholomew's Church, Brighton (1711). The drawing is not as effective as Mr. Wilson's water-colours are, nor does it indicate much of the detail of the work, nor is there any plan to show the rearrangement of the chancel; and it may well be questioned whether such a drawing as this, on so large a scale, has any right to usurp so much of the wall space of the small and inadequate room devoted to architecture. It is a clever *tour de force*, done without much care, and of no value whatever as an architectural illustration, though no doubt it looks well on the wall, and that seems to be what is chiefly thought of in selecting the architectural drawings.

The number of public buildings of the most important class among the drawings is less than usual. Messrs. Lanchester, Stewart, & Rickards exhibit a perspective drawing of their successful design for the Cardiff Municipal Buildings, which we hope is going to be carried out. The design of the tower, which was the weak point in the competition design, has been modified and considerably improved, and the design of the whole group as here worked out in perspective quite confirms the good opinion which we gathered from the elevations and plans as shown in the competition drawings. The details belong for the most part to what may be called the common property of Classical design, but the building considered *en masse* is an original one, and its originality is combined with dignity and a certain common-sense quality which is not an undesirable element in public buildings. We wish however, that the plan of the building had been added. We shall publish an illustration of this drawing next week. The other most important public building design is Mr. Belcher's Colchester Town Hall, which is illustrated in a large and bold coloured perspective somewhat roughly executed (1756), and by geometrical drawings of the details of the tower, with the plan of various portions marked on the elevations (1743). This latter is one of the best pieces of architectural illustration in the room, and the kind of drawing of which we wish to see more examples in the architectural room. In the general view the effect of the three groups of columns each carrying a circular pediment, the whole making a series of features extending from the upper line of the basement to the roof, is very bold and striking; and the tower, with its crowded upper story carried on a plain brick stalk, is very effective. Mr. Belcher also exhibits a large perspective view of the new Guildhall for Cambridge (1,734). As in the Colchester Townhall, the character of the design may be described as "variations on the later English Renaissance." The plan of the façade shows three projecting masses, at the two ends and the centre, the end ones solid, the centre one with open columns; on the ground floor they are connected by a loggia and balustrade defining the general line of the front and uniting the three projecting masses, leaving a large balcony over the loggia. The curious part of the design is the exceedingly bold treatment of the finish to the end blocks, a play of massive rusticated work carrying an immense stone (?) globe which must be eight or ten feet in diameter. We presume these are hollow; externally they present the appearance of enormous terminal ornaments, and though they are certainly open to criticism on the head of scale, it cannot be denied that they have a very bold and striking effect—a kind of detail that one can imagine Vanbrugh would have much enjoyed. Mr. Beresford Pite exhibits the elevation of his competition design for Colchester Town Hall (1751), with plans. The elevation is finely and boldly treated, showing three large arches the whole height of the front, the two side ones forming frames to the grouping of the windows, the centre one being scooped out into a large alcove or apse, within which steps are arranged on a reverse curve to that of the apse; the effect of this would have been very striking in execution. The upper portion of the tower is treated with a great deal of freedom and play of line. Mr. Brydon exhibits his design for Colchester also; more *rangé* than Mr. Belcher's, but less striking and original (1624). The treatment of the main portion of the elevation is dignified and effective; there are two stories of rusticated wall, with windows; then a deep sculptured frieze, and a more delicately treated upper story with a columnar order. The tower is not very effective, partly from being too much cut up into sections by horizontal string courses, a treatment which weakens the expression of height and verticality. We like to see a tower go boldly up for a great part of its height in an unbroken line, and then develop into an upper stage, the function of the lower portion being to carry this at the requisite height. There are other systems of treating a tower no doubt; it depends partly on the general character of the building; but in general nothing is so effective as the nearly plain stalk with a richly treated upper story. Mr. Brydon also exhibits a perspective view of the Art Gallery and Library at Bath, a Classic building of charming simplicity and excellent proportion of parts, and thoroughly expressive of its purpose. The main block consists of a rusticated ground story with plain circular headed windows, and a rather higher upper story of plain walling, crowned by a cornice and balustrade, and decorated with pedimented niches containing statues; over the doorway is a more important niche flanked by columns and with a segmental pediment above which two seated figures support an escutcheon. The plain square lines of the main block are contrasted by a quadrant curve at the angle, above which is a stage set back a little with an order of coupled columns, and crowned by a small dome. Though the materials are of the simplest, there is nothing in the room more pleasing and satisfying to the eye than this design.

Among the large buildings which are illustrated is Messrs. Gordon, Lowther, & Gunton's Royal Masonic Institution for Boys at Bushey (1632). This may be, and very likely is, a very good building or collection of buildings, which appear to be in a collegiate Gothic style, and to be arranged round one large quadrangle, and one or two other small ones. But this is the kind of drawing which we can see no possible use in exhibiting. It is a bird's-eye view (as usual hung *above* the level of the eye, which is the way bird's eye view drawings are nearly always hung at the Academy), of small scale as far as the parts are concerned, as the buildings are very extensive, and with no plan. Such a drawing is of no possible value to students of architecture, and perhaps still less to the public. Another educational building illustrated is the Roedan School (1685) by. Mr. J. W. Simpson, a very pleasing group of buildings in which, as we find from the block plan, the masters' houses are arranged in the front portion of each return wing and the school-house at the back of the quadrangle (the buildings run round three sides of a square). The open spaces between the houses and the buildings in their rear seem too small. Mr. Basil Champneys exhibits a rather bald-looking line of elevation of the Robinson Memorial Tower at Oxford (whether already carried out we know

not), showing a row of collegiate dwellings with a tower in the usual quiet Oxford style at one end, and a vaulted entrance in its ground story; the building suits the *genius loci*, but does not present any feature to distinguish it from many other buildings of the same class. The small block plan is not very intelligible; the residential portion is divided off into three spaces on each of which is written the word "staircase" and nothing else. Drawings for exhibition might as well be got up with rather more attention than this.

Among the more important exhibits is a large frame of illustrations of various portions of Jardine Hall, the old Scottish house to which Mr. May made extensive additions some time since, including an entire remodelling of the plan on a very fine scheme; the elevation and plan were published in the *Builder* of May 12, 1894. The drawings show a general view of the exterior, the dining-room with a massive wooden ceiling, the staircase, the interior of the spacious porte-cochère, and one or two other portions of the house, which as thus altered and enlarged forms one of the most interesting and successful recent examples of domestic architecture on a large scale.

We have diverged for the moment from the public buildings, but may return to them to mention another and very picturesque one, Mr. Hare's Public Library, Shoreditch (1728) shown in a very effective drawing by Mr. Raffles Davison (who, if we mistake not, is also the artist of the Jardine Hall drawings just mentioned). It is becoming difficult sometimes to pigeon-hole designs under special styles now, and one does not know how to describe this except that it is a building essentially Gothic in feeling and treatment but with later Renaissance or Georgian details for the most part. The two rows of plain mullioned windows, with small entablatures over the upper ones and cornices to the lower ones, have a great breadth of effect, and contrast well with the mass of plain wall with a pyramidal roof which forms a kind of tower at the end, diversified by a circular turret corbelled out and finishing with an octagonal ogee roof just clearing the main cornice. The doorway, with pilasters and a triangular tympanum over, is placed in the lower portion of the *quasi*-tower, from which a bracket clock projects above. The merit of the design, as an exterior, consists in picturesque character combined with quiet and unobtrusive detail. We have no doubt the plan is a good one, for Mr. Hare rarely fails in that respect, but his exhibit would have been much more valuable if he had allowed visitors the opportunity of studying the plan also.

We have been obliged to confine ourselves in this article to commenting on some of the more important and prominent drawings; as there is no opportunity of seeing the Academy, catalogue in hand, till the Wednesday, there is rather short time left for going into the subject. In one or two future numbers we shall have more to say.

A NOTE ON THE COMPETITION SYSTEM.

THE paper read by Mr. B. Creswell at the Architectural Association last week, and reported in full on another page, is a very spirited one, and represents very ably the case against competitions. Any one who is reading a paper with the object of attacking a system is bound, of course, to take more or less the attitude of a prosecuting counsel; to marshall as strongly as possible all the facts that can be adduced in support of his views, and ignore the arguments on the other side. Mr. Creswell may not have intentionally done so, but it is the natural result of writing a paper to attack a system.

We should at once admit that a great many small buildings are put up to competition which are not worth such a sacrifice of the architect's time. In fact, some people seem to have got the idea that a competition is the natural and proper way of procuring an architect's design for any and every kind of building. A correspondent wrote to us only a few weeks ago to the effect that he wanted to make additions to a house, and what was the usual course—was it not to put it up to competition? This is an exaggerated instance, but the mania among small corporations for having competitions for every little school or hospital they want to erect is absurd and mischievous—perhaps more mischievous to the promoters of the competition than to the architectural profession; for no architect of good position will enter into these competitions, and the corporations who promote them thereby shut themselves out from having the services of the best class of architects and condemn themselves to be served by inferior men. In many cases too, these small competitions are got up mainly for the amusement of the borough authorities or to make a show of impartiality, when in reality it is an understood thing, behind the scenes, that the commission will be given to some favoured person who is lying in wait for it. And this kind of procedure is absolutely immoral.

But in the case of large and important buildings there is a great deal to be said on the other side. Mr. Creswell argues that the system is inimical to art. It was not thought to be so in Italy in the Renaissance period, it is not thought to be so in France at this moment; and France, taking things all round, is certainly the most artistic nation of the present day. In France, not only buildings but decorative paintings for their adornment, and in many cases sculpture for public monuments, fountains, &c., are made the subject of competition among artists; and we have not heard that the French artists dislike the system. It means with them "la carrière ouverte aux talents," a sentiment which has had a charm for the French mind ever since the days of Napoleon. But generally speaking, in France there is a sketch competition first, and three or four of the best out of that are selected for the final competition. It has been said in this country that a sketch competition for architecture is worse than a single one, as it is only giving the competitors double trouble. That is to a great extent the fault of the competitors, who will try to outvie each other by sending highly-finished sets of drawings where only sketches are asked for, and where the assessor (for we are assuming his existence) can form a judgment just as well from a rough sketch as from a finished drawing on a small scale. The system of a limited competition by invitation does away with one of the real advantages of competition—the opportunity for a man of talent who is not known; an advantage which is almost as great to the promoters of the competition as to the architect.

It appears to us, therefore, that for important buildings the influence of the competition system is beneficial and not prejudicial to art. When properly and honestly carried out, it is a means of getting at the best that can be done; it stimulates an interest in architecture; it may lead and has led to the execution of a fine design by a man who would have had no chance of the commission except in a competition. And even those who produce a good design which is unsuccessful have not lost everything; they have had some enjoyment out of it (for we quite agree with Mr. Pite's spirited defence of competition in this respect), they have gained some new development of their own powers, and they may gain indirectly a great increase of reputation as the author of a good though not of the best design. All these are points well worth consideration to the credit side of competition.

Mr. Creswell urges that under this system we put up architecture to the judgment of ignorant persons, but he admits that the appointment of a professional assessor has now become the rule rather than the exception in important competitions, which is partly an answer to that argument. The weak point in regard to a single assessor is that, though able and impartial, he may have strong proclivities of architectural taste, and that design will seem best to him which accords with his own preferences as to style. In France an important competition is often decided by a jury of two or three architects, which is of course much better; but we should imagine that in that case the exercise of the office must be honorary. The suggestion has been made that it should be so in England—no more fees for the assessors: partly on the ground that assessors would in that case be always employed. The architectural profession can, however, compel the employment of the paid assessor by unanimously refusing to compete without him. The change might be an advantage if we could then have the French jury system instead of the single assessor. With the single assessor system the assessor must be paid, as it is assumed that he must be a prominent man, whose time is therefore valuable, and who could not possibly afford to give the requisite time to studying a large number of designs as a labour of love.

NOTES.

The South Wales Coal Strike.

ALTHOUGH the dispute is still unsettled, and there are no immediate prospects of peace, the suggestion made on Monday in the House of Commons by Mr. Ritchie is admirably calculated to clear the way to a conference between the contending parties. The difficulty at present is that the men have declined to entrust their representatives with plenary powers; a state of things which, the colliery-owners rightly argue, would render a conference of little or no avail. Mr. Ritchie's very sensible and practical proposition is that the men should choose a body of delegates with powers to settle on their behalf, who should be in attendance for consultation during the negotiations between the committees of employers and employed. The President of the Board of Trade points out that if this were done the workmen's committee would not be empowered to effect a settlement but they could consult with and obtain

authority from the delegates. Thus the spokesmen at the conference would be in the position of a solicitor with his client within reach to authorise or veto any proposed course of action. The question of the regulation of wages in the future forms another obstacle to an early settlement of the dispute. The employers naturally wish to come to some arrangement before resuming work; whereas the men, in pressing for an immediate advance and resumption, are unwilling to discuss a new sliding scale or any alternative system. It is to be hoped that a settlement may be arrived at which will obviate the risk of a reopening of the dispute at any moment.

Westminster Improvement Scheme.

THE rejection of the Bill for the Westminster Improvement Scheme on Tuesday was almost a foregone conclusion, after the public feeling which has been manifested with regard to it. The promoters might have found more favour with the Government if they had shown a different spirit and a better method in first setting their scheme before the public. But their first proposed block plan showed such an almost cynical contempt for every consideration except that of getting the most money out of the ground, and such an absolute ignorance of or indifference to considerations of architectural effect, that a prejudice was created against them at once; and their rushing thereupon into the arms of Mr. Norman Shaw to receive the consecration of æsthetic taste at his hands was a move made too late, and too obviously as a mere matter of policy, to do away with the effect of their first announcements. But for this blunder at the outset, they might have got their Bill into Committee; but it is perhaps better as it is. To give such great powers for public improvements into the hands of any private company is rather a dangerous precedent.

The Westminster Catastrophe.

THE collapse of the concrete roof over Abbey Mansions, Westminster, is a serious matter, and it is important that full information should be elicited as to the cause of it—whether it arose from faulty principle of construction, bad material, or careless workmanship. No doubt evidence in regard to this will be forthcoming at the coroner's inquest, which is adjourned till May 9. We shall publish an illustration of the building next week, when Mr. Pawley, the architect, has promised us full information as to the structure of the roof.

Responsibility for Sewage Effluent.

AN important action was decided in the Queen's Bench Division on Saturday last by Mr. Justice Grantham and Mr. Justice Kennedy. It appears that on December 7, 1897, the High Wycombe Gas Company passed into the sewers of the district a large quantity of very offensive liquid, containing "liquid ammonia," and that no special means were adopted by the officials of the High Wycombe Corporation to purify the sewage containing this objectionable matter on its arrival at the sewage-irrigation works; in consequence, the sewage effluent, which was passed into the Wye, a tributary of the Thames, was so foul as to kill "a large number of fish" in the Wye, and, of course, polluted the Thames. The Thames Conservators at once took action, not only against the Corporation, but also (and, we think, wrongly) against the Gas Company; in both cases the defendants were fined. Against this decision of the local magistrates the Corporation appealed, with the result that their appeal has been allowed with costs, and the conviction by the magistrates has been quashed. This is a curious decision, and dangerous. The judges appear to have supported the Corporation because the offence with which they were charged "was at best a mere error of judgment on the part of their officers;" but surely a master is responsible for his servant's "errors of judgment" while engaged in his service? In this case, too, we are strongly of opinion that the conviction of the Corporation should have been upheld. If it is to be held that every manufacturer turning refuse into a sewer is responsible for the failure of the Sanitary Authority to purify the sewage, it will lead to endless confusion, besides shifting the responsibility from the Authority whose business it is to see to the adequate purification of the sewage. Mr. Justice Grantham said that the case was "anything but free from difficulty," and was "very near the line." We think that his decision is over the line, and that it will be dangerous to allow it to become a precedent.

The Light Railway to Exmoor.

THE opposition to the proposed light railway from Minehead on to Exmoor is, like that to the recent attempt to run a new line in the Thames Valley, of more than local interest. It is to be observed, in the first place, that the Light Railways Act was passed with a view to agricultural produce being more easily delivered at large centres of population. The present line is proposed for the purpose of excursion traffic. It was also intended that light railways should be promoted by the inhabitants of a district. The intended line is promoted by persons from a distance, and is opposed by the local people. It is clear that the population of England is now so large that it is a great temptation to company promoters and railway companies to arrange schemes so that hundreds of excursionists may be unloaded in certain places for a day only. It becomes more necessary, therefore, every year, for those who desire that some districts, at any rate, should be preserved from these barbaric incursions to take care that the schemes of railway companies are carefully watched. We have not the least wish that the working population of the country should not have their day's outing, but picturesque districts should not be spoilt by the inroads of people who can enjoy themselves just as well, or even better, in other places.

Acetylene at the Imperial Institute.

ON June 1 next it is intended to open an exhibition at the Imperial Institute of appliances for generating and burning acetylene. The exhibition will be open to the public free of charge daily from 11 a.m. until 1 p.m., but from 1 p.m. to 11 p.m. a charge will be made. Wednesdays will be reserved for the admission of Fellows of the Institute and their friends. The Council of the Society of Arts has appointed a Committee to settle the conditions under which exhibits will be admitted. The Committee consists of the following members:—Major General Sir Owen Tudor Burne, Sir Frederick Bramwell, Professor James Dewar, Mr. H. E. Jones, Professor Vivian B. Lewes, Mr. Boverton Redwood, Professor W. C. Roberts-Austen, Professor J. M. Thomson, and Sir H. Trueman Wood. The Committee will test all generating apparatus before admitting it to the exhibition, but the admission of a generator to the exhibition will merely show that it is considered by the Committee perfectly safe for use at the exhibition, and will not imply that the Committee recommends the generator for general use. The carbide will be that manufactured by the Acetylene Illuminating Co., at Foyers (Scotland), who are at present the only makers of calcium carbide in Britain. Exhibitors will be allowed sufficient carbide to supply a seven-light gaselier for a period averaging not more than five hours per day, and each burner must not consume more than one cubic foot of acetylene per hour.

Electric Tramways and Water Mains.

THE paper read on the 21st inst. by Mr. Parshall at the Institution of Electrical Engineers was an excellent contribution to our knowledge of "earth returns for electric tramways." When the rails are employed in a tramway system to return the current to the dynamos, the Board of Trade insist that the difference of pressure between the two extremities of the line must be less than seven volts. It therefore came as a surprise to those present when Mr. Parshall said that from measurements he had made on a tramway eight miles long he found that only 40 per cent. of the current came back through the rails, the other 60 per cent. coming back through the earth. In other words, the drop in pressure was less than half what it would be if all the current came back through the rails. Electricians were reassured, however, when the author said that the stray currents at this low pressure showed no tendency to be diverted by gas or water mains, but merely went through the ground itself. In places where the earth was a bad conductor he recommended that the return conductors be isolated as much as possible from all other metal conductors likely to be affected by electrolysis. He advised that from several points on the rails "feeder mains" be taken and the current collected from the rails by means of these mains, thus preventing great currents from flowing in the rails and leaking to earth. He pointed out that when rails of high conductivity were used, they wore away very rapidly. It was better to use harder steel and to use "feeders." Tables of interesting and accurate tests on the various kinds of bonds used in addition to the fish plates for connecting the steel rails were given, and the loss at the bond was cleverly analysed into its various component parts.

Liskeard Church Tower.

THE Liskeard tower matter seems to have ended in a compromise which will probably satisfy no one. It is to be rebuilt after all, as far as we can gather from the rather confused report of the proceedings at the special Vestry meeting last week, but on a smaller scale than was originally intended for the proposed new tower, and on a design which it is said "will harmonise better with the church." We hope it will, but the object was to save the old tower; that seems to be doomed, while on the other hand the destructive party, one

of whom at the Vestry said that the people of Liskeard had been insulted and treated as "puppets," have not got anything to satisfy them. Altogether the result seems unfortunate, though it is possible that the tower now proposed (we have not seen the design) may be less of an architectural interloper in the district than the one for which the money was promised.

Old Watch-houses in London.

IN a "Note" in our last number (p. 387, *ante*) we mentioned the watch-box which, until a few days ago, stood against the front wall of Goslings & Sharpe's Bank, No. 19, Fleet-street. Messrs. Barclay & Co. have refused many offers to purchase the relic, which, we believe, is the last of its kind that remained *in situ*. The watch-houses, too, are disappearing likewise, and only two or three have survived to our own day. The largest is that in Marylebone-lane, now forming portion of the St. Marylebone Court-house. Above the east door is a coat of arms, having an angel and a lion rampant for supporters, and with a coronet, all finely modelled, beneath which is "A.D. MDCCXXIX." A lower tablet is inscribed :—

ST. MARY.LE.BONE WATCH HOUSE
REBUILT A.D. MDCCCIV.

In Collingwood-street, and adjoining the churchyard of Christ Church, Blackfriars-road, stands the "Watch and Engine House," now a mission hall, bearing an inscription stating it was built in the year 1819; there is another adjoining the east end of St. Sepulchre's, Holborn, and built in 1791, near the site of the old St. Stephen's chapel of that church. The watch-house in a corner of St. Botolph's churchyard, Bishopsgate Without, latterly converted into a shop, No. 201A, in the main street, is commemorated by a tablet in its wall :—

"This Watch-House was Rebuilt Anno Domini 1771, JAMES TOWNSEND, Esq., Alderman."

whilst that in the churchyard of St. Anne's, Soho, was adapted for purposes of a mortuary. The original St. Giles's watch-house stood in High Holborn, at the end of Newton-street; the later one, known as the parish Round House, near the west end of St. Giles's Church, was taken down in 1690; its successor, in the Coal-yard (now Goldsmith-street) adjoining Barley-court, was finally pulled down in 1884 for the erection of new almshouses; the inscribed tablet has been preserved. A nightly watch for London was established in 1253, and continued, under various local Acts, until 1829 when, in pursuance of the Act 10 George IV., c. 44, the parochial police and watch outside the City, together with the Bow-street foot patrol, were superseded by the present force on a system which V. G. Dowling, editor of *Bell's Life in London*, claimed to have originated.

The Metropolitan Tabernacle, St. George's, Southwark.

THIS building, destroyed by fire on the 20th instant at an estimated total loss of 35,000*l.*, was erected by subscription for the late Rev. C. H. Spurgeon in lieu of the hall at the old Surrey Gardens, upon what had been the site of the Fishmongers' Company's almshouses, at Newington Butts.* In February, 1859, the competing architects' drawings (sixty-two sets and one model) were exhibited in the neighbouring Horse and Carriage Repository. By a vote taken amongst themselves about forty of the competitors assigned the first premium to Mr. E. Cookworthy Robins, of whose designs a perspective view will be found in our volume xvii., March 19, 1859. The committee, however, gave their award to W. W. Pocock, and the fabric was erected, though with some ultimate modifications, including the abandonment of the four turrets, after his designs as illustrated (view and plan) by us on March 26 of that year. The competition gave rise to a great deal of correspondence in the *Builder*, see vol. xvii., from some of the competitors and others. The estimates amounted to 14,954*l.*, and thirteen tenders ranged from 26,370*l.* to 21,500*l.*, with 593*l.* for earthwork and drainage. The Tabernacle, costing, it is said, 32,000*l.* in all, measured 140 ft. by 80 ft., and 60 ft. high. It had a capacity in the ground floor and two surrounding galleries of 5,897 persons—standing room included. A conference hall, class-rooms, and other offices were subsequently added. It is surmised that the fire, first noticed in a corner of the upper gallery just above the main entrance, was occasioned by the overheating of a flue from the kitchen in the basement.

* The almshouses, or St. Peter's Hospital, built in 1618-36, out of the Kneseworth (1513) and other trusts, had three courts, a chapel, and a hall; they were rebuilt 1850-1, at East Hill, Wandsworth.

Lord's Cricket Ground.

THE Committee of the Marylebone Club are acquiring gradually the property around the north and west sides of their cricket ground. Last year the house and large garden of what had been the St. Helena Home were added to Lord's. During the past winter the M.C.C. have acquired No. 3 ("Duncroft House"), Grove End-road, and No. 22 ("The Vines"), Elm Tree-road. They intend to pull down the tennis-court fronting St. John's Wood-road, together with the adjoining racquet-court—mostly rebuilt in 1875—and the adjacent block of two houses, up to the south-east gates, and to build new tennis and racquet courts on the freshly-acquired site behind the pavilion. Thus the old tennis-court, whose clock-dial and creeper-clad walls have for long been a familiar feature of the ground, will give way to another great mound for spectators' seats.

The Lockwood Memorial and the National Portrait Gallery.

AN appeal has been made in the Press for a subscription for a memorial to the late Sir F. Lockwood. The objects are the endowment of a bed in a London hospital, an erection of a memorial in York Minster, a brass tablet in St. Margaret's Church, Westminster, and a portrait to be offered to the National Portrait Gallery. It is with the last only that we are concerned. No one doubts that Sir F. Lockwood was an able legal advocate, and a deservedly popular man, but it is equally certain that he would have been the first to admit that he had not attained the importance in his day which would justify the admission of his portrait to the National Portrait Gallery. That Gallery should be confined to the portraits of persons of historic importance, of men who have left a mark on their epoch. It is already full, and if every popular or eminent lawyer is to have his portrait placed there it will soon be necessary to double the Gallery in size. The idea of placing Sir F. Lockwood's portrait there is another instance of the modern idea which seems to consider almost every man who has risen above the ruck to be worthy of a biography. We hope, therefore, that the Trustees of the National Portrait Gallery will refuse any offer of the contemplated portrait—a refusal which would in no way be a denial of the many charming qualities possessed by the late lawyer.

The 1900 Paris Exhibition.

THE studies are in progress for a "Château d'Eau" on a grand scale, which is to occupy, at the Paris Exhibition of 1900, the place lately occupied by M. Bouvard's dome for the 1889 Exhibition, now demolished. The base of this monument will be eight mètres above the level of the soil, it will be reached by a circular staircase of 150 mètres in length, bordering the cascade. On the centre piece of the cascade will be a group symbolising "l'Humanité conduite par le Progrés et s'élançant vers l'Avenir." The decorative details will be in the style of the Louis Seize epoch. There are to be alleys adorned with fountains radiating from this central object.

THE NEW GALLERY EXHIBITION.

WE read in some of the daily papers that the New Gallery has never had an exhibition of greater and more varied interest than the present one. It seems the fashion to say this of the New Gallery, just as it is the fashion to run down the Academy; in fact one is sometimes tempted to think that the Press notices of the New Gallery are written in collaboration with the Committee or the exhibitors, or at all events that the critics are *amis de maison*. The exhibition contains some remarkable portraits; in other respects it can hardly be said to contain any picture which is really of the first order, and it includes a great deal of work that is mediocre and uninteresting, and some that is very bad.

The salient figure pictures, other than portraits, are Sir E. Burne-Jones's "St. George" (141), Mr. Watts's "Early Spring" (113), and Mr. John Collier's "Godiva" (246). The first-named is a very well-executed painting of a girl of the sad-faced and long-chinned type which the painter has familiarised us with, dressed up in a picturesque and beautifully painted suit of armour, to represent St. George. That is the only reading one can give of the picture; the figure is not a man, still less a knight; his face differs in no respect from that of the Burne-Jones woman, and one feels irritated and rather contemptuous at seeing this epicene creature offered to us as a symbol of knighthood and courage. Think of Donatello's St. George, and compare it with this conception! Mr. Watts's "Early Spring" is a painting of a little child, barelegged, in a white frock, in the middle of a wood with a bunch of flowers; the head is beautiful both in colour and expression; the legs and feet much less delicately treated and hardly seeming to belong to the face. But on account of the head this will take its place well among Mr. Watts's child figures. Mr. Collier's "Godiva" is a less common-place and more refined treatment of this hackneyed subject than we generally see. He recognises, of course, what painters have usually overlooked, that ladies in those days rode astride like men; he gives us a "side elevation" of a splendid grey horse richly caparisoned, and the lady seated in a velvet saddle, her head bowed forward and her long hair gathered over her bosom with one hand. The proud action of the horse is purposely contrasted with the meek resignation of his rider; that is evidently a point of the picture; but Godiva's distress is not very poignant; the picture is only sentimental, it might have been pathetic. In the brilliant texture of the horse's neck there is a little too much suggestion of a very well executed rocking-horse of the more elaborate and expensive type.

Among the other prominent figure-pictures Mr. Jacomb-Hood's painting of an Italian woman and child "In the Shade of the Vines" (19) is surprisingly academical for a painter who is usually so vivacious and original, and is a disappointment. So, to some extent, is Mr.

Abbey's carefully composed work "A Poet" (39); a kind of Decameron scene where the poet, in long nearly white drapery, declaims to some ladies on a terrace in front of a mass of dark richly-tinted trees through which a flight of stone steps leads up to the "back scene," as one may say, for the whole thing is rather theatrical. The composition as a whole is striking, but the individual figures are not as interesting as one would have expected from Mr. Abbey. Mr. Walter Crane's allegorical painting "The World's Conquerors" is only of value for the moral, which we could have in poetry better than in painting. Mr. G. Harcourt's large painting "Too Late" (253) is a piece of commonplace on a large scale, and below it Mr. Holman Hunt's head called "The Beloved" (255) is something absolutely painful to the feelings as well as to the eyes; it is intended as a pathetic head of Christ, and is little better than a grotesque. Mrs. Swynnerton's ideal figure representing "St. Martin's Summer" (156) is hardly a success; it wants the element of beauty which is the real *raison d'etre* of a subject of this kind. The artist has however succeeded at all events in producing an effectual puzzle for the ordinary picture-gallery promenader, as was amusingly evident—"But what does it mean?" "Why do they do it?" &c. In fact, the picture is perfectly intelligible and justifiable if it had only more beauty; but we cannot say the same of Mr. Watts's "Can These Bones Live?" a work which, from the point of view of the art of painting, is perfectly unjustifiable.

"Can these bones live?" is a question that might be applied to the pseudo-mediæval pictures which as usual find place in the gallery, such as Sir E. Burne-Jones' "The Prioress's Tale" (82) and Mr. Strudwick's "Evensong" (75). These are works of a kind which are dead already; affections of archaism, quite wrongly applied to Chaucer, who was a most wideawake poet of his day. Nor, for another reason, is there promise of life in Mr. Boughton's "When the Dead Leaves Fall" (116), a figure pretty but devoid of life or reality. One turns with more pleasure to some smaller and less pretentious works; Mrs. Tadema's lively little "Impromptu" (79) and the small portrait of "Lady Waterlow" (86), laughing with her sunshade across her knees; Miss Gow's pretty symphonies in white of mother and child (232, 241), and Mr. Lemon's clever realisation of Don Quixote and Sancho, "The Discovery of Mambrino's Helmet" (66). These at all events do not "affect the obsolete."

The portraits, some four or five of them at least, are in one sense or another the most notable things in the collection. On the west wall of the north room are the four most conspicuous ones. Mr. Shannon's "Mrs. Harold Burke" (188) is a perfectly artistic combination of flowered dress, sofa, elaborate paper or stencilled wall pattern, amid which the face of the personage seems a little eclipsed, but the picture is an artistic and harmonious whole. Next comes Mr. Byam Shaw's portrait (192) of a young lady in walking dress, planted rigidly on the centre line of the canvas with her back to a very showy gold wall-pattern, against which the figure is relieved in the most crude and materialistic manner; the walking-jacket and the skirt making two successions of harsh straight lines widening out to the base; if we overlook the break made by the junction between skirt and walking cloak, we might compare the whole figure to an acute isosceles triangle set upright on its base. This is a kind of portrait that every one looks at because it is so odd-looking and so obtrusive in its lines; but it is not an agreeable work. Then follows Mr. Sargent's charming and most dramatic portrait of "Mrs. Thursby" (200), a lady seated with bright eager expression and an attitude as if just about to rise up from her chair to give more emphasis to a repartee. One has seldom seen a portrait more full of animation than this. Then comes the large work by Mr. Arthur Melville, the artist who paints in dots and blots at the Society of Water Colours, and who has painted the portrait of a lady (207), with an immense expanse of silk dress which looks as if it were dashed on with sponges or a large house-painter's brush, and a face which must surely be a travesty. There is a great deal of cleverness in this, but it is pretentious, violent, and ugly. On the same wall is M. Carolus Duran's brilliant half-length of a young girl, a child (196) with glancing lights on her hair and face, a picture a little hard, but a truly charming work nevertheless. It is interesting to compare this portrait, so redolent of modern life, with Mr. Watts's fine picture called a portrait of Mrs. Ivo Bligh (91), one of the painter's allegorical figures, with their peculiar colouring, richly dressed in a modern costume, but which does not at all suggest the portrait of a modern lady, though it is a very fine work in itself.

There are no landscapes of the highest rank. There is a large and rather powerful one by Mr. Reid (189) which a little too much suggests a leaf out of Constable's book, and a work by Mr. East, entirely different from his usual manner, "A Mystic Pool" (218), a kind of idealised landscape of rounded hills, masses of rich warm woodland and of ivory white cloud; and in the foreground a pool nearly lost in a tangle of thicket in a dark hollow; two nude nymphs, dimly seen, look out through the boughs. The landscape is hardly nature, but it is a fine poetic conception founded on nature. Mr. Adrian Stokes has done himself no justice in "The Cross in the Forest" (92), a poor piece of sentiment without much work in it; Mr. Peppercorn's "The Common" (136) is a picture with a unity of treatment about it, a fine and solemn sentiment, somewhat marred by a very dirtily painted sky; and Mr. Arnold Priestman's "Sundown" (145) is a fine work which looks as if it had claims to have been better hung. Mr. Edgar Wills's "'Twixt Day and Night" (191) is a good study of twilight effect; in "Arcadia" Mr. Leslie Thomson has produced a very pleasing kind of pastoral poem in combining trees, bank, and water with rich lights and reflections, with the nude forms of a group of girls bathing or grouped on the bank, half seen in the shadow, so that the whole is idealised in a manner in keeping with the title given to the picture. Mr. Olivier's "A Garland Greeting" (62) is a combination of landscape and figures which may be compared with this, though with a very different technique; here the figures are clothed, but are people of an ideal world nevertheless. Among other smaller works may be mentioned Mr. Hartley's "On the South Downs" (5), only a shoulder of hill and clouds; Mr. E. Stott's "Gleaners" (20), a fine piece of autumn colouring; Mr. Parsons's "The Back of the Village" (35); Mr. C. W. Wyllie's "Moonlight over the Marshes" (153); Mr. Parsons's "Larkspur and Roses" (140), a garden scene with an old gate beyond; and two or three pictures in which architecture plays the prominent part—M. René Billotte's "Ruines" (9), and "Vieux Canal à Dodrecht" (143), both good, and Mr. Logsdail's "The Market Boat" (130).

The one architectural drawing proper in the exhibition, as usual, is one of Mr. Robson's, a perspective view of "Proposed Public Buildings, Cheltenham" (429). If architectural drawings in general are tabooed at these exhibitions, one can understand why an exception should be made in favour of the original architect of the building; but we do not understand why no others should be admitted.

The sculpture is not very important as a whole. Mr. Taubman's bronze group "Rescued" (464), apparently represents the saving of a woman from a wolf by her hunter-husband in the iron age; it is spirited, but not very sculpturesque in line. Mr. Mullins exhibits a prettily-composed group of two "Sisters" (462), an adult and a child; Mr. Onslow Ford an excellent likeness (bust) of Sir C. Hallé; Miss Emmeline Halse a pretty miniature wax sketch of "Waterbabies," and Miss Rope a charming little bas-relief of children dancing. The most new and original among the larger works is Mr. G. Cowell's "Tired" (458), a bronze of a nude boy leaning back against a decoratively treated wall with hands spread out on either side, and holding apparently a skipping-rope which drops in a curve behind the figure; the head is on one side in an attitude of sleep or drowsiness. This is a pretty work, but the attitude and what they call on the stage the "business" seem more suitable to a girl than a boy.

NEW TRAVELLERS' CLUB, PICCADILLY.—It is announced that in the course of next week all the furniture and effects of the club will be sold by auction. The club-house, at the south-east corner of Whitehorse-street, was built seven years ago, by Messrs. Alfred Bush & Sons, contractors, from the plans and designs of Messrs. Thomas & Frank Verity. We published a view of the premises taken from the south-east in our number of October 15, 1892.

THE ARCHITECTURAL ASSOCIATION:

THE MORALITY AND ECONOMY OF COMPETITIONS.

A MEETING of this Association was held on Friday evening last week in the Meeting room of the Royal Institute of British Architects, No. 9, Conduit-street, Regent-street, Mr. Hampden W. Pratt, President, in the chair.

The minutes of the last meeting having been read and confirmed,

Mr. G. B. Carvill, junior hon. sec., proposed a vote of thanks to Mr. F. B. Wade for permitting members to visit Lord Windsor's house, Mount-street, and also to Messrs. Spalding & Cross and Mr. H. T. Hare for permitting members to visit the Shoreditch Public Baths and Free Library, and to Mr. E. J. Wakeling, J.P., for conducting the party over the baths. The votes of thanks having been carried,

Mr. E. Howley Sim, senior hon. sec., said he wished to remind members of the soirée to be held at the Café Monico, Piccadilly-circus, on Friday, the 29th instant.

The Chairman announced the commencement of the following classes:—Mr. Weedon's Water-colour Class, on Saturday, May 7, at 2.30 p.m.; Mr. A. O. Collard's class on Professional Practice, on May 2, at 6.30 p.m.; and the Sketching and Measuring Class, at South Kensington Museum, on May 3, at 6 o'clock.

Mr. G. B. Carvill announced that the next Spring visit would take place on Saturday, May 7, to the New Crown Theatre, Peckham, by permission of the architect, Mr. Ernest Runtz. The last visit of the session would be on May 21, to the new Tooting Hospital.

The House List

The Chairman then read the House List for the coming session, as follows:—President, Mr. G. H. Fellowes Prynne; Vice-presidents, Mr. P. J. Marvin and Mr. A. S. Flower; Committee: Messrs. T. W. Aldwinkle, jun., R. S. Balfour, A. Bolton, F. D. Clapham, H. B. Creswell, B. F. Fletcher, M. Garbutt, A. H. Hart, W. B. Hopkins, J. Murray, E. H. Parkes, Beresford Pite, W. A. Pite, H. A. Satchell, W. H. Seth-Smith, H. D. Wilkinson; Hon. Treasurer, Mr. Hampden W. Pratt; Hon. Librarian, Mr. C. H. Freeman; Hon. Secretaries, Messrs. E. Howley Sim and G. B. Carvill.

Hon. Auditors, Messrs. H. P. G. Maule and J. W. Stonhold; Hon. Solicitor, Mr. W. H. Jamieson; Assistant Secretary and Registrar, Mr. D. G. Driver.

The Chairman said that any two members could make other nominations at the next meeting of the Association on May 6, but they must first obtain the consent of the gentlemen they nominated.

Mr. B. Creswell then read the following paper on "The Morality and Economy of Competitions":—

Some two years ago I had the honour to contribute to *Architectural Association Notes*, the organ of this society, a series of articles in which the subject of architectural competitions was lightly touched upon. Certain figures relating to the number, value, and dimensions of public competitions were assumed as fairly approximating to the real ones, and it became manifest that the competition system, when viewed from the basis afforded by these figures, was irrational in the extreme. In spite of the popularity of competitions, it seemed that the whole fabric of them constituted for the profession an inconceivable folly, and accordingly the results and conclusions ensuing from these assumed figures appeared incredible; but as these figures were certainly within the limit of fair supposition and probability, it struck me that if the actual statistics could be obtained and exhibited in their true significance, our competition system could be demonstrated to be at once futile and disastrous, both to the interest of the profession and to the art of architecture, and the system accordingly fall to utter disrepute. I was quite unaware that as early as 1838 a special committee of the Institute had investigated the matter in detail; and that twenty years ago the same idea had urged the late Mr. Thomas Porter, a Fellow of the Royal Institute of British Architects, to proceed upon the same lines that had been laid down for this paper. I found I had elaborately taken my apple-cart to an orchard where the trees were already stripped. Mr. Porter made an exhaustive investigation of the facts and figures relating to competitions, and, by general admission, clearly demonstrated and established the futile and disastrous character of the system; but, so far from his

revelations bringing competitions into disrepute, they would seem to have stimulated the promoters to new and more extravagant irregularities, and the competitors to a keener rivalry. I duly discovered the existence of Mr. Porter's elaborate tables only when I had gone far towards completing just such a series of tables myself, which was to a certain extent unfortunate, because Mr. Porter's figures are most carefully verified and completely establish and prove those points which they deal with, and a great deal of my own investigation must therefore prove largely superfluous. After what has been said, it would be well to capitulate the history of the various protests and objections that have been raised against the competition system in this country. I do not know whether the commission to build the gateway of the Baptistry of Florence, which Ghilberti won in competition, was the occasion for protests and objections, but, though it may not generally be known, organised and systemised protests against the system date from quite early in this century; and, for the better part of a hundred years, at least, the voices of ingenuous architects, defrauded in open competition, have been heard in choruses of lament, deploring the tyranny of rural shopkeepers, and combining to make public protest and demonstration just as they are to-day. I have noted the following instances and occasions, but no doubt there were others which have not fallen under my notice.

In 1838 a Committee was appointed by the Institute to consider this subject of competitions, who, having thoroughly investigated it, seemed appalled by its difficulties, and concluded by publishing a report containing much "valuable information, but leaving the remedy very much as it was before in the hands of the profession." In 1850 the Architectural Association considered the question and drew up a report containing a code of regulations, which it was suggested would meet the difficulties of the case. In 1857 Mr. George Morgan read a paper before the Institute upon this subject, which led to a debate, in which everyone agreed again that something *ought to be done*. In or about 1860 the "Architectural Alliance" took steps to draw up a form of circular suggesting terms of "General Conditions," which were sent to such Committees and Councils as showed symptoms of breaking out into competitions. In 1871, on the occasion of the General Congress of Architects, Professor Kerr read a valuable paper on the subject of the commercial aspects of competitions. Every one agreed that *something ought to be done*. A Special Committee was again nominated and deputed by the Congress to investigate the matter and report accordingly. In 1872 this report, together with a code of proposed regulations for the conduct of competitions, was read before the Congress of that year, and the Congress were, with one exception, unanimous in agreeing that something ought to be done. The exception was Sir Edmund Beckett, who made a very able and interesting speech in the character, as architects may consider, of devil's (or grocer's) advocate.

I may mention here that it is the recommendations made by this report, revised again in 1883 and in 1892, which to-day stand in the Institute Kalendar as "Suggestions for the Conduct of Architectural Competitions." In 1879 Mr. Thomas Porter read his exhaustive paper on the subject, in which the best that has been said in demonstrating the suicidal folly of the profession in acquiescing in the competition system is there printed and set down. After hearing that paper, everybody was as completely satisfied as they had ever been that something ought to be done. It was a past President of the Architectural Association, Mr. Cole A. Adams, who the next year did—or very nearly did—the necessary "something," by drawing up and circulating a memorial which was signed by 1,300 architects, who thereby bound themselves to take part in no competition save where a "professional adjudicator of established reputation was employed." This was presented at the Institute by the late George Edmund Street in 1881, when the subject was again discussed. It is indeed a cause for regret that the activity aroused by Mr. Porter's laborious investigations, and organised by Mr. Adams' energies, should have been allowed to burn itself out without profit to any one; because it was the occasion of a revelation of such importance and significance as is not likely to occur again, and the fact of this enterprise having failed to any substantial purpose, sets the profession in a much more hopeless position than if the endeavour had never been made. It has to be said, however, that while the Special Committee of 1872 found that professional assessors were rarely employed, I find that in the present day more than half all competitions are benefited by the services of such an assessor. There is no reason to suppose that this is not a direct result of Mr. Adams' memorial. Nevertheless, when such a momentous occasion has wrought such a small benefit, how can we hope other men to interest themselves actively in a reconstruction of the system? Still, as far as one is able to judge, the Institute and indeed the profession in general is as firmly convinced as it was in 1838 that something ought to be done, which is a matter for congratulation. The subject came up again when in 1883 a Special Committee of the Institute was appointed to revise the regulations for conditions of competitions drawn up in 1872, but I am not aware that it has found any prominent or special attention in the fifteen years intervening, so that there seems some reason for the conclusion that the failure of Mr. Porter and Mr. Adams in 1881 has unfortunately tended to relegate the subject to the great limbo of the hopeless causes. But there is hope. We have seen that in 1838 the Institute debated this subject, in 1858, in 1871, and 1872; and in 1881 and 1883 it held debates and read papers on the same subject, and if, therefore, things continue in the world of competitions as they have been doing for the past few years, it seems a reasonable ambition to hope and expect that the Institute will shortly read another paper to itself on the same subject, over again, and draw up some fresh reports and make some more suggestions.

Of the figures which are here presented for the first time, I may say that they have been modified from what was originally hoped and intended of them. It was found impossible to discover the actual number and value of all competitions in Great Britain over such a period as should afford an unquestionable average figure of competitions in any one year, because a large proportion of competitions are only advertised locally. In England alone, I have it on high authority, more than half of all competitions are not advertised or noticed in the professional journals, and from my own investigation it was made clear that both in Ireland and in Scotland the tendency is to preserve and confine competitions to their respective countries, a circumstance for which, under existing conditions, we can scarcely be sufficiently thankful. One is inclined to predict that, if these two countries opened their doors, and our voracity for competitions did not flinch from the new undertaking, the profession would, figuratively, fall limb from limb and rot away.

The figures and facts hereinafter dealt with, therefore, must be regarded as having reference to England only, but even here they are inadequate to give any idea of the magnitude and extent of the system for the already stated reason of the inaccessibility of local statistics.

It should be explained in passing that it is upon the basis of averages that the subject is to be here dealt with. The system has manifest advantages over that in which special cases are enumerated. It is a fairer method, because in dealing with so wide a subject a selection of special cases can be made to illustrate any assumption or point of view, and prove any desired conclusion. It is clear, because it condenses the whole field of the subject to a single representative item, and reduces the whole matter to its vital and primal element. It is absolutely necessary in considering this subject of competition to regard it in its wide and general bearing as affecting the profession and the art, if any profit is to derive from that consideration. To investigate it from the point of view of the individual competitor, and with an eye to his personal welfare or disadvantage, is scientifically absurd, besides being obviously absurd in many other ways as well. There is little doubt that this horrible incubus of competitions which torments the profession, would never have grown to a serious harm if we had considered the matter in its universal and general bearing, and not in its personal and particular aspect. Competitions, therefore, will here be dealt with in relation to the profession as a whole, and a scheme of averages is used as being the most serviceable to that end.

The following figures, which are presented in the annexed table, are the result of a search through the files of the *Builder*, both in the advertisement columns and those of the body of the journal, and cover a period of two years. As has been explained, they refer *to England alone*. In the years 1894 and 1895 there are some seventy-one advertised public competitions, or, say, thirty-six advertised in each year. The average value of a building for which competitive designs are publicly invited is 9,000*l*., so that the value of the buildings whose designs are made in public competition advertised in the *Builder* is about 324,000*l*. yearly. The average value of the First Prize (and premiums may be considered to be always offered, though there are solitary exceptions) is 56*l*., and besides a sum of 52*l*. is divided in smaller prizes. The average number of competitors I find to be about forty.

Now the cost of making the drawings in a competition of the value of 9,000*l*. may be fairly put at 30*l*. for an average case, being eight drawings at 4*l*. each. This sum does not cover the time of the principal, but the actual cost of producing the drawings. It is true that this cost cannot be at all exactly stated, because the amount of work put into competition drawings varies considerably, for obvious reasons. It is, however, a fallacy to omit in computing this cost, such items as rent, light, and general office expenses, on the ground that they would have been incurred in any case; and it is wrong to consider that, because the principal makes the drawings with his own hand, they have cost him nothing. If he had done this amount of work for some employer he would have been paid, and by doing it for nothing he may be considered out of pocket to the extent of the value of the work. Indeed, he has probably lost more than if he had employed an assistant, because, should he choose to work for his hire, he could command a higher price than what he would pay his draughtsman. The Special Committee of 1872, already referred to, stated in its report that the cost of producing competition drawings (irrespective of principal's time) varied from ¼ to 20 per cent., and from 2*l*. to 800*l*., so that an assumed average of 30*l*. in a competition of 9,000*l*. seems well below the mark. This figure gives an average expenditure by architects of 1,200*l*. upon each competition, or an out-of-pocket loss in each year of 43,200*l*. This, remember, only refers to such of the public competitions of England as are advertised in the *Builder*. I find a slight decrease in public competitions in the last twenty years; but this seems more than balanced by the mass of limited and local competitions.

Gentlemen, I am not going to amplify and emphasize the significance of these figures further. This phase of the subject has already been done to death. But I claim for them that they establish and demonstrate our competition system to be commercially rotten and unsound—that it is irrational; that from an economic point of view it is a monstrous anomaly, and that it is the occasion of expense and extravagances which could hardly be justified even if the policy of the system was shown to be widely beneficial to the dignity of the profession, and the distinction of the art. This, how-is not the case. Our system of competition as a policy is so disastrous to the status of the practitioner and so enervating to the art itself, that even if the economic considerations were satisfactory, and the system beneficial to the pockets of the profession, it could still be shown desirable that the system should either be abolished or entirely reconstructed. This question of policy may be considered quite apart and aside from the economic question, which we have now done with, but it is necessary to explain that the remarks and the conclusions proffered in this and the following columns, do not refer to those large public competitions for valuable and important buildings which are published and discussed by us all; but to the general ruck of competitions, including limited and local competitions, which are here designated and included in the term "*our Competitive System*." Public competitions for national and monumental buildings, in which the best-established and most reputable of our architects take part, must ever stand in a very different light, and be viewed with a very different sentiment from that which is roused by the wild, tumultuous disorder of the common herd of competitions.

It seems to be assumed by many people that competitions are a means to the end—building. This, of course, is not the case. It is, indeed, conceivable that the noise and excitement of a competition in a small township may stir up and inflate the emulation of the bigwigs of neighbouring towns, and infect with the fever of building those who otherwise might have

remained spotless of the disorder ; but this is too fanciful and conjectural to be seriously debated. The fact is that a certain number of buildings will be raised in a given year, and we may consider the existence or otherwise of our system of competitions to have no weight in deciding what that number shall be. This complex mechanism of public competition exists solely to determine which precise architect shall be employed to carry out this or that individual work ; and after fifty years of this struggling and grunting and tearing and fighting among ourselves, it is still found that the architects of England have raised England's architecture—precisely the same state of things that would have been effected, without competitions, in peace and goodwill. Our competition system has crowded the profession, and crowded it very largely with ineptitude. In these days we all go in for the grand handicap for premiums before we know how to run. It is a scramble wherein all sorts of unlikely people come in first. The opportunities for a young man to find a standing in the profession by a single stroke of good fortune induces many to enter the profession who would not dare to face the long stern path by which alone success is usually to be sought. They are dazzled by a game wherein success relies so little upon sterling ability, and so much upon the chance circumstances of prejudice and bad taste in ignorant people.

The policy of the system is detrimental also to the art of architecture, as well as to its practitioners; because it effects that the selection of architectural designs shall be made precisely by the class least qualified to form a right judgment. The class who acquire the right of selection under the system—the hanging committee in the gallery of architecture—are not merely ignorant, but they are saturated with the most blatant forms of vulgarity. Our competition system has secured that a large and important division of our national architecture, shall interpret and immortalise the ideals and aspirations of precisely the most degraded and insignificant class intellectually in the country ; a class that it is educated in positive ignorance, and cultured in execrable artistic proclivities and tastes. It is not, unfortunately, a case merely of callousness or indifference ; the rural Town Councillors of remoter England positively select with a rare pains and discrimination the worst designs—not merely or necessarily the most hideous and ineffective, but just those which are most laden with studied assumptions they cannot support, which pretend to qualities above their kind and station, and which cry out their sham importance—precisely those designs which are least fitted to exist, which most insidiously degrade and pollute the morals of all who pass beneath their walls. The custom is to speak in fulsome terms of the enobling influence exerted upon the mind of man by true and refined architecture of lofty aspirations. If this be a just and true estimate of the potency of architecture to influence and modify the ever changing moral tendencies of a people, and I do not think many will dispute it, we are entitled to apply the reasoning to the other side of the picture, and turn our attention to the false and mean qualities which characterise the greater part of our architecture. What horrors of infamy then do we not see being daily inculcated at our street corners, gentlemen, and what iniquitous deeds must be those performed in the trades of our bricklayers, masons, and carpenters. And of these insidious stimulants to moral degradation which are daily rising inch by inch throughout the country some of the most evilly-intentioned are those raised in public competition. The influence of these to undermine the pure motives of humanity in those whose life is spent under their shadow is the stronger and the more to be deplored, since the buildings hold a significance in being for the most part public buildings, the property of the township. The sermon of there stones is preached from an authorised pulpit. It is sufficiently melancholy that that class which, as has been said, is cultured in a positive ignorance of matters relating to art, and which is permeated with the undignified instincts and ambitions of small trade, should hold the privilege of perpetuating these deplorable instincts and ideals in the majority of the public monumental buildings in England ; but it is a great deal more melancholy that architects (in acquiescing in a system of competitions which grants these unfeeling creatures the choice of some forty designs) should have added the privilege that enables them to secure a design which portrays their own meagre commercial instincts and their motives of brag, assumption, and self-advertisement much more thoroughly and effectively than they could reasonably have hoped to obtain from a private architect. It is true that an assessor is most usually appointed, but it is certain that he has little authority with the average Town Council upon a question of design, and nearly all conditions of competition expressly state that his award is not held binding upon the promoters, as will be shown hereafter. The tendency of our deformed system is to secure that a great deal of architecture is soundly and thoroughly vile, which otherwise might have been merely weak and poor.

In view of our own unfortunate condition, it is curious to read of the architects of Belgium who, in and about the year 1887, were desperately concerned to secure this same usage of public competition which we would now be quit of. I am not aware whether the Belgians succeeded in grafting a system of competition on their public, but one would imagine that if the typical Belgian grocerman has any qualities in common with the British grocerman, that there was little enough difficulty about it. The traditions of the profession in Belgium had been opposed to competition. However, the "Central Society of Architecture" at the outset decided that "if competitions were to give good results, they should be properly organised," and upon this understanding it is interesting to notice the recommendations on behalf of the policy of competitions as stated in a paper read before the society in 1887. "The advantages of the system," said the speaker, "are thousandfold. It enables artists to make their talent known. It does away with favouritism. It is an arrangement essentially moral, equitable, and just. It permits the inclusion of all ideas, ancient and modern. All schools, Gothic, Renaissance, Classic, may be set before the public and their value known. A constant emulation is provoked ; it stimulates travel and study, and gives all a legitimate right to see their efforts crowned and their talents recognised."

These, gentlemen, are the terms in which a brother architect has advocated the policy of a properly organised system of competitions; but if we put our own system to the test of these various recommendations, we shall find that so far from showing the advantages of our system, the disadvantages are proved. Our competition system assuredly does *not* do away with favouritism ; we have abundant evidence to show that it provokes it. A set of competitive designs is an assurance to the promoters that their favourite is not incompetent ; he has shown up with the rest. It is an arrangement essentially neither moral nor equitable nor just. It may certainly permit the inclusion of all ideas, both ancient and modern, and, for the matter of that, demoniacal as well, but the system allows and indeed promotes a lax and unreserved treatment in design, and in this country it is restraint and not freedom that had just now best to be promoted. A constant emulation is indeed provoked, but it is not an emulation in knowledge of style, or power of true expression, but in a smart, taking, meretricious knack of design. Lastly, it cannot fairly be urged as a recommendation to our competition system that it enables artists to make their talent known. There are men of proved quality who have found their opportunity in competition, but it still remains to be shown whether they would not have established their ability just as effectively and as effectually had they abstained from competition, as Pagin, Nesfield, and Mr. Norman Shaw have done. There are many notable instances of men of the highest reputation who owe nothing to competitions, and some who have altogether abstained from them. There is a general approval of competition on the ground that they give young men an opportunity of showing their worth. I have heard them called "the young man's friend," a touching phrase, which, however, lost in pathos from being employed by a young man who wins competitions. As, however, a young man must look to compete forty times for every first award he wins, we may rather consider them the "young man's enemy," for it is appalling to think of the host of young men who have thrown away their best energies and hopes in the preparation of useless drawings. These waste drawings, accumulated for a period of twenty-five years, Mr. Porter computed would pave a way from this room to Grantham, or their strainers, lying one on top of another, make a tower 1,000 ft. higher than the highest mountain in the world. This computation is far below the actual facts, however ; for it, also, refers only to public competitions advertised in the *Builder*. The great names in art are not altogether those of men who have risen to acknowledged supremacy in early life, and early success is usually vastly detrimental to the artist. The very essence of true power is that it shall come of long vigils of self denial and long years of self-contained labour. A genius usually has to make his own public. In these days the matter for remark is not slow acknowledgment of worth, but rather the numbers of men who spring into superficial notoriety, and who are never again heard of, or whose names are never associated with any admirable or commendable work. This is because men spring into notability upon specious and meretricious qualities. Merit is content to wait ; demerit is not. The men who are most successful in their professional life, in their art, are those who start without fallacious incentives, false aids, and without haste, and without greed of those rewards of acclamation and patronage which is the gift of the discerning British public.

I may here quote from the debate on Mr. Porter's paper some words spoken by Professor Kerr, which are both interesting and remarkable, as being the balanced opinion of one who had had a wide and varied experience :—

"The only conclusion I can arrive at with any regard for common sense is that the system of architectural competition is radically unsound in principle, and in practice most prejudicial to the profession of architects both financially and morally. Whether it benefits the public in any way may be for a moment questioned, but even on this point I believe the answer must be eventually in the negative. . . . . Commencing at the age of two-and-twenty in no less remote a place than New York, where I gained my first premium, I find that I have engaged in about twelve competitions, never competing at random, and frequently trying what I could do, as if for the honour of the cause, in the most important contests. I have gained four first prizes, one second, and two otherwise highly satisfactory positions ; once I was paid in full with all the others, and four times I have been wholly unsuccessful. I mention this with a certain hesitation for the sake of saying emphatically that, in spite of all, I have never got any real good by competition . . . .

I have never known any man succeed in establishing by competition any reputation which he would not have better acquired without it, except occasionally a bad reputation, which, but for competition, he might fortunately have been able to escape. I know of no other temptation in business so subtle as that which assails, as I think, a high-minded man when involved in architectural competition, and especially if he is to be successful. I know of men who have succeeded by competing in attaining to the promise of a position which they were not qualified to hold, but they have never been able to retain it, and have in several cases been ruined in their legitimate prospects by the consequences of such hasty and fallacious good fortune. I do not hesitate to say that competition success leads generally to personal and public disrespect ; and this not through jealousy alone or personal offence, but by reason of the ordinary estimate of the qualities by which alone such success can be obtained."

It is a common usage to exclaim against the promoters of the competition when there has been inequitable treatment of the competitors, or a precedent has been made in new irregularities. This, however, is unreasonable. Competitions are not a matter of philanthropic consideration—there is no suggestion of philanthropic motives or of mutual concessions for mutual benefit. In any other transactions involving such large outlay, and such weighty consequences, the architect, in common with his fellow-citizens, protects himself according to commercial usage, and there is no reason why he should make an exception in the case of competitions. A Town Council desire something for which it is prepared to offer certain moneys or advantages, and architects, by accepting those terms, have committed themselves beyond dispute as being satisfied with them. The promoters, regarding the matter solely as a commercial or business enterprise, can only suppose from the rivalry and enthusiasm the competitions evoke that they are esteemed and valued of the profession. It is no conspiracy on the part of the public, of the promoters, that has led to this lax and lamentable state of affairs, but a conspiracy of greed and weakness on the part of the profession. I take the liberty to again quote from Professor Kerr :—

"I am sorry to say," he remarks, "as a result of

a long and intimate acquaintance with the profession of architecture in all its departments, that there prevails among the young men—even among the youngest men—an undisciplined restlessness and a fatal feeling of rivalry with their seniors; in one word, an absurd impatience of mere self-conceit which exists nowhere else within my observation. I attribute this circumstance—speaking advisedly—chiefly to the public recognition of the idea, with respect to architecture as distinguished from everything else, that meretorious adolescence may attain instant ascendency by the happy institution of competition.

The framing and enactment of competitions is, as has been said, purely a matter of business and of commercial enterprise. Upon no other basis is their existence intelligible. There is no question of philanthropic motives, nor of a mutual scheme for mutual benefit. The conditions of competition as now drawn up may be in general very fairly described as a sham legal instrument; it is a sham form of contract wherein the obligations of the competitors are clearly and exactly defined, and the obligations of the promoters set in such loose, ambiguous terms as render them open to any interpretation that subsequent events may show to be most profitable to the promoters. The conduct of a public or limited competition is clearly a matter of contract, and it is the business of each party to see that his interests are properly protected in its terms. It is, therefore, weak and foolish for competitors to cry out and protest when they find that they have the worst of the bargain. It is usual in such cases to charge the promoters with having broken their word, with having falsified their explicit undertakings, but surely redress for such injury as is here claimed lies not in the sympathetic columns of the professional Press, but in an action at the High Court. The truth is, however, that it is very rarely that promoters of competitions go back on their precise undertakings or falsify their explicit promises. This is not for any qualms of sentiment or conscientious scruples, but for sheer lack of any precise undertakings to go back upon, and utter dearth of any explicit promises to falsify. When an assessor's award is set aside, or when the winner of the first premium is supplanted in his commission to do the work, there are invariably long and loud protests; pathetic appeals to common honesty and fair treatment from us poor architects, who forget our greedy rivalries for the moment, and are bound in one common sympathy of misfortune. Someone read a paper once on "Professional Etiquette." One does not think it could have been unduly long. This common misfortune may be described as the only bond of sympathy still existing among us. But to keep to the subject of conditions of competition, I have drawn up a table which enables me to substantiate what I say. This table gives the gist of thirty-two conditions and instructions, as sent to competing architects, taken haphazard from the portfolio lately instituted for this purpose, in the library of the Royal Institute of British Architects. Upon this basis I find that in 50 per cent. of cases an assessor is appointed, that in 77 per cent. the premium merges in commission; that in no case is the winner of the first premium promised the work, but that, on the contrary, 54 per cent. state that the committee is "not bound to accept first award," and 35 per cent. state that they do not bind themselves "to accept the first or any design." That in no case is the assessors' award stated to be absolute, but that, on the contrary, in 100 per cent. (estimated on a basis of thirty-two instances) of the cases it is expressly stated or clearly implied that his award will not be absolute—that the committee do not hold themselves bound by his decision. I may also call your attention to other little delicacies offered, where the thoughtfulness of promotors is again instanced. In order to mitigate the fevered enthusiasm and passion of emulation with which they have noticed we fling ourselves into competition, they have docked the commission in some 16 per cent. of the cases by making the 5 per cent. include quantities of other extraordinary expenses. I also discovered four cases where no conditions existed at all, and also a little gem, where there was no premium offered, and yet another, where the ten guinea premium was to merge in commission if the work was carried out within five years.

And now, gentlemen, we come to put the finishing feather in the cap of the guy which the profession has manufactured and parades before the derision of all sensible people. Although these conditions are so monstrously unreasonable, prejudicial, biassed, unbusiness-like, and unfair, nearly all of them have been ratified and approved, if not actually drawn up, by a professional assessor; an established architect of position and, usually, of reputation. It is hardly necessary to remark that this state of things is opposed in spirit and in detail to the "Suggestions for the Conduct of Public Competitions," published in the Institute Kalendar. It is hardly fair, however, to hold assessors individually responsible; for it is the common usage, the custom of the profession. Every competitor, we know, would be an assessor if he could; and it is not to be expected that a man should martyr himself in a cause where his individual self-denial would work no good, and for which he would receive no thanks or even recognition, but it is indeed deplorable that such a state of things should exist. How are architects, in the face of this corruption, which they sanction and maintain, and even promote, to support any attitude of dignity and integrity for the profession in the eyes of the public? Is it to be marvelled at that a young architect is expected by his first clients to work for nothing? We most of us have been invited to drains as though we were being asked to dinner. Some time ago it was under heated discussion whether architecture was an Art or a Profession. I believe the matter was not altogether definitely settled, but for one's self, as it has altogether failed as a profession, one is bound to consider it an art. When, however, we travel behind the scenes of our competition system, the matter would seem to resolve itself into the question: Is architecture an aberration or a vice. I submit, that of the general ruck of competitions not one grain of professional or artistic enthusiasm has place—if enthusiasm may be estimated in grains. The desire to compete is born of unrest, worldly ambition, weak unbalanced inclinations and false hope bred of an incontinent longing for the plums of life before the just harvest time: to be got, not legitimately, but by a short cut. Every one knows that the knack of winning competitions is not the knack of design. Even Sir Gilbert Scott admitted that his designs made in competition were necessarily different from those he would have made for a private client. Professor Kerr has insisted that the man who wins is the man who gets the best information from the best source. The ordinary competitor does not think of consequences, or he would not compete. He is buoyed by excitement; and it is this memory of his intoxicating excitement which prompts him and entices him to further risks. It is no use or purpose to show him that it is forty chances to one against his winning—any more than it is to tell these things to the gambler or the betting man. The whole circumstances of the ordinary architect in competition is that of a gambler making a big stake. The central idea originated in the principal, reverberates through his surroundings. A common way for a competing architect to pay for assistance in his competition, is by a promise of double or treble pay to those who assist, in the event of his success. They all contribute on the understanding that they share the prize money. These sort of transactions are common enough on the turf. Architecture, however, is a profession. One once went to visit some friends who were in for a competition. One called as usual at midnight. Their rooms were full of men, mostly in their shirt sleeves, cleaning and finishing up the drawings. In a corner, a young quantity surveyor was getting out an estimate like a man possessed. There was also a frame maker, blocking two doors and a passageway. Excepting the frame maker, possibly, the whole crew were banded together for the excitement, the sport, the glorious uncertainty, and the chance of treble pay and long drinks if the principals came in winners. Architecture, however, is an art.

The whole atmosphere and environment of competitions is corrupt. I know personally of a competitor who was approached frankly—unreservedly—indecently—by a member of a Promoting Committee in a late competition. The committee-man inquired whether he wished him to work for him on committee. The whole unruly surroundings of competitions is opposed not only to professional dignity, but to the ordinary natural sensitiveness and reserve of a gentleman. This is how one would have an architect to regard the matter, he should apostrophise thus: "My worthy grocerman, I will design and build you your bacon larder, or your genteel residence, with its gewgaws and furbelows, and thank you for the commission; but I will not struggle at your door with forty others, to submit my knowledge to the verdict of your ignorance, and put my cultivated taste to the test in the balances of your cultivated vulgarity."

Can anyone believe, until he has eradicated from his mind the whole field of competitions, that architecture is either a profession or an art. Let me tell you the true and fascinating story of Durham, it is not a very old story, but it will bear a lot of re-telling when we wish to be stung to a recognition of the melancholy status of the profession. I especially tell the tale in reference to the question, Is architecture a profession or an art? It will be observed that it is a case which rises out above the general run of competitions to which my remarks heretofore have had reference. In other words, it is an exceptional case, above the average in value and importance.

To begin with, any architect entering for this Durham competition, promoted by the County Council of Durham, had to pay a fee of 5*l.* before he could know upon what precise terms he was to be humbugged. This is a common expedient with promoters to stave off the first mad rush of the architects. The assessor selected six designs, from which he made the final selection of his awards. The committee paid the first premium, awarded a local architect the second premium, and gave the latter the commission to execute his design. This local firm's design was stated not to have been included in the six designs of the preliminary selection. Then the profession made a strong stand. It got right on its hind legs. It *objected*. It objected in the professional press; it objected in printed circulars sent to the Council. Fourteen of the competitors signed this circular-letter, praying that the winner of the first premium should be appointed to execute the work. They also pointed out that not only was the local firm selected by the Council not included in the first six, but that his design should, under the conditions of competition (for the luxury of which they had staked 5*l.* each) have been disqualified. This memorial was sent individually to each member of the Council, shortly before the meeting which was to make the final irrevocable decision, with the intention, we may presume, of sapping their native resolution with such a show of firmness. Our powers of objection now became almost inspired, and certainly beyond human precedent. Two of the competitors, solemnly appointed and deputed by vote of them all, went and took residence in a hotel close by the building in which the Council were to meet. Think of it! Two live competitors at hand, in a hotel, in person to bring shame to the naughty Councillors! Notification that these two protesting Professionals were actually *in situ* at the hotel was duly sent to the Council. One regrets to say that there is no evidence of the Council having winced in bulk at this ominous news. We can fancy the pallor-stricken subordinate official bursting upon the elect Councillors of Durham with the extraordinary intelligence. One has tried to realise the terrorising effect, or the persuasive influence of a brace of protesting architects in a hotel, inviting there inspection and examination from the townspeople. One has altogether failed. One can hardly picture anything funnier. Our profession is content to go out to battle with a glass tube and a mouthful of rice, instead of having recourse to the solicitor's letter, which is usually employed. The result of this venture was that the Council said that they claimed legal right on the conditions of competition, and, further, that the disqualifying features in their awarded design had not been brought under their notice, while a noble Lord who had got washed up on to the Council in the late high tide of municipal aristocracy, denounced the protesting brothers' cause as "a professional squabble."

What else than something of this kind we could have expected to get from the Council it is not very easy to imagine. The protesting brothers seem to have appealed to the Council's sense of justness, to its goodness of heart, and so forth; which, in face of the printed regulations accepted open-eyed by each competitor, was quite beside the mark, and an affront to both the understanding and the feelings of the Council. Apparently the deputation of protest expected to be answered somewhat as follows: "Gentlemen, we have been touched by your appeal to our good nature and sense of poetic justice, and though we were careful in the

'conditions' to secure a free right to appoint whoever we might choose, yet your eloquence has shown us so clearly how base and shameful our motives were, that we herewith withdraw our decision, and agree to do what you wish." Unfortunately, side by side with our champion objectors' words of appeal, was the complacent admission of the assessor, who told the Council that "of course they were not bound by his award."

And now, gentlemen, bearing this scene in mind, is architecture a profession or an art?

A very great number of suggestions have been made for the amelioration or reorganisation and reconstruction of competition, but, so far as I know, no one has suggested that we should, in the matter of competitions, individually regard architecture either as being a profession or an art, or both, and that we should return to that attitude of independence with which it is hoped most of us left school or college, and which was ours before we were enticed to the attitude of the emulative haberdasher soliciting some one's "valued order." We are wont to deal with matters relating to a private commission from a quite different standpoint to that from which we regard competitions; but I think few of us will deny that the wide generality of local competitions has spoiled our clients; and I think you will agree that the ordinary man who has not the advantage of a private fortune or a circle of the right sort of friends is almost compelled to submit to humiliating treatment from his prospective clients.

For my own part, I feel strongly against turning the profession into a sort of trades' union, yet most of the remedies which are suggested imply that, or tend to that end. The matter lies in our own hands. Our disordered competition system is a monument to our incontinent unthinking greed and folly. We have over-reached ourselves, and we must retract and amend, and bring matters back to a condition of ordered decency.

The power lies chiefly with assessors, because they are few, and because they are men of substance and position. It should surely be with them a *sine quâ non* for their sanction of conditions of competition, that the terminology is legal and free of ambiguity, and that the various clauses are fair and reasonable. There is a very strong general disinclination to enter a competition where an assessor is not employed. Let it be noticed and understood in the profession that the assessor is a guarantee, that the "Conditions" is a legal document, and that the clauses are fair and reasonable in the circumstances (which at present is far from being the case, as we have seen), and it will soon be difficult to get any one to enter a competition where this guarantee is wanting. This may not do much to ameliorate the radical false basis of the system, but it will mitigate its corruptions and irregularities, and it will enable these affairs to be enacted with such decorum as befits an occupation which is only uncertain whether it is a profession or an art.

Mr. Aston Webb, in proposing a vote of thanks to Mr. Creswell for his paper, said that the question of architectural competitions was a most serious one. The practice was in vogue at the present time, and, as the lecturer said, such was the condition of affairs that "something ought to be done." He had listened very carefully to the paper, and he was very much afraid that the result of it would be much the same as that which followed other efforts in the same direction. He had listened very attentively to Mr. Creswell's conclusions in order to know what, in the lecturer's opinion, should be done; but he did not gather from the paper that Mr. Creswell had any special remedy to propose. He, the speaker, knew Mr. Porter very well, and it should be remembered that that gentleman himself very often took part in competitions, and although, according to his statistics, competitions had such disastrous results, he was a competitor on a good many occasions. It was impossible to check the statistics either of Mr. Porter or Mr. Creswell, and as had been said there were such things as "lies, big lies, and statistics," and, unless one were very careful, statistics might prove to be the biggest of all. It was impossible to tell the actual cost of competitions, and although no doubt it was very heavy, and although the cost was a grievous burden to the profession, still the question was, what could be done to reduce the burden? He thought that Mr. Creswell hardly laid enough stress on what had been done, although he did mention the Memorial which Mr. Street had presented, and to the preparation of which Mr. Cole Adams gave a great deal of time. The object of the memorialists was a very definite one, viz., to induce architects not to compete where an assessor was not appointed. A strong point in Mr. Creswell's paper was that highly trained and cultured men were willing to submit their works to what had been called the "crass ignorance of the grocer-man"; no doubt that had been so, more especially before the presentation of the Memorial; since then a great improvement had taken place, and a qualified assessor was now a generally-recognised factor in a competition. Where there was no assessor, architects should decline to compete, and they should also decline if they had no confidence in an assessor, and if they were not satisfied with the conditions. No architect could be too careful in satisfying himself as to the fairness of the conditions, and as to whether the assessor was a man of knowledge and of sufficient backbone to secure the carrying out of his opinions by committees. According to his experience, committees were more lacking in knowledge than in fairness: they really did not understand architectural matters, and if the subject were laid clearly before them by an assessor they were generally ready to accept his opinion. He, the speaker, was not concerned to defend the system of competitions: he knew the great harm that had been done by them. At the same time he could not say that the system was altogether bad, and one advantage was that an opportunity was presented to young men to make a name earlier than they might otherwise do. The question might be considered under three heads: The effect of competitions upon architecture, architects, and upon the public generally. With regard to the effect upon architecture, a system which had produced the Houses of Parliament and St. George's Hall, Liverpool, could not be said to have done badly by architecture, and there were many modern buildings, which it would be invidious to mention, which had been the result of competitions, and which had distinctly advanced the art of architecture in England. Undoubtedly the planning and arrangements of public buildings had been

ANALYSIS OF THIRTY-TWO CONDITIONS OF PUBLIC COMPETITION, AS ISSUED TO COMPETITORS. TAKEN AS THEY CAME TO HAND FROM THE PORTFOLIO AT THE LIBRARY OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

Value.	Premiums.	Assessor?	Premium to Merge in Commission.	First Award to Execute.	Drawings Property of Committee.	Assessor Absolute.
—	50·20·10	Yes	Yes	Not bound	1	No
—	20·10	Yes	Yes	" "	1 and 2	No
500	10·5	?	Yes	" "	1	No (5 per cent., including quantities)
(over 9,000)	50·25	No	Yes	" " Nor any	1 and 2	No do. do.
4,000	30·20·10	Yes	Yes	" "	1, 2, and 3	No
3,500	25·10	No	Yes	" "	1 and 2	
1,800	20·15·10	Yes	No	" "	1	No
30,000	100·50·25·15	No	Yes	" "	1, 2, 3, and 4	
5,000	30 and 20	No	Yes	" " Nor any	—	
15,000	50·30·20	Yes	Yes	" " " "	1, 2, and 3	No
5,000	30·15	Yes	Yes	Yes: if competent	?	No
—	20	No ?	No	Not bound. Nor any	1	No
2,500	20·10	No ?	?	Designs only asked	1 and 2	No
16,000	75·50·25	Yes	Yes	Not bound	1, 2, and 3	No
—	None.	No ?	?	" "	Yes	No (5 per cent. to include travelling, attendance at board, extras on contract, &c.)
300	7/10·2/10	No	?	No mention of execution	1 and 2	
—	—	—	—	No conditions	?	
?	20·10	No	Yes	Not bound. Nor any	1 and 2	No
5,500	50·35	Yes	Yes	" " " "	1 and 2	No (5 per cent. No expenses)
?	150·100·50	Yes	Yes	" " " "	1, 2, 3	No
4,000	25	No ?	Yes	" "	?	No
?	10/10	Yes	Yes	" " Nor any	?	No
7,000	40·20	No ?	Yes	" "	1 and 2	No
4,000 (about)	—	—	—	No conditions	—	
1,800	—	—	—	" "	—	
4,500	50·20	No	Yes	Not bound. Nor any	1 and 2	
9,000	50·20	Yes	Yes	" "	1 and 2	No
15,000	50·25	Yes	Yes	" "	1 and 2	No
4,000	—	—	—	No conditions	—	
7,500	—	—	—	" "	—	
7,000	40·20	No	No	Not bound	1 and 2	
8,000	—	—	—	No conditions	—	

THE AVERAGE ENGLISH PUBLIC COMPETITION.

Computed from the basis of seventy-one English Public Competitions advertised in the *Builder* in the years 1894-5*; from particulars of these same competitions subsequently appearing in the body of the journal; and from an analysis of thirty-two "conditions of competition" (see other table).

Value.	Premiums.	Competitors.	Promise of Assessor.	Premiums to merge in commission.	Promoters "not bound" to accept "1st award."	Promoters "not bound" to accept "1st or any award."	All Premiated Designs Property of Promoters.	The 5 per cent. commission to include extraordinary expenses.	Assessor award admitted to be absolute.
£9,000	1st £56, other prizes to value of £52.	40	Over 50 per cent.	77 per cent.	54 per cent.	35 per cent.	73 per cent.	16 per cent.	Practically never.

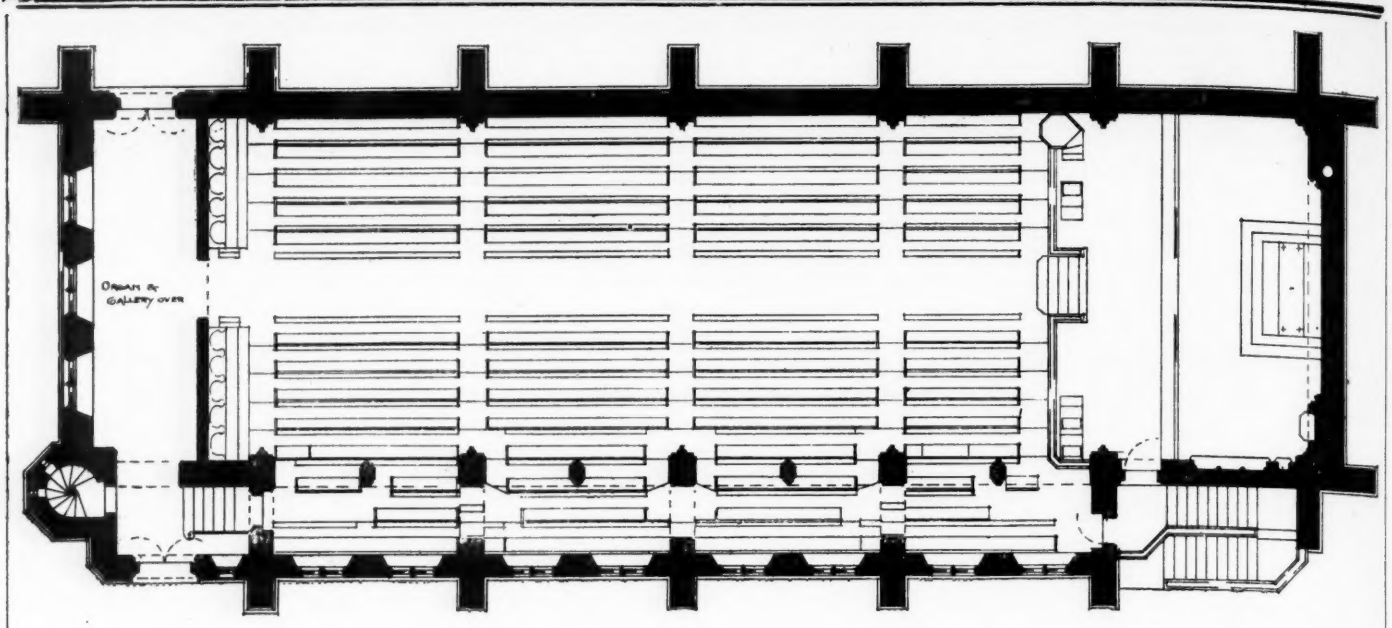
* It is not meant that each item has been worked out from seventy-one cases. Full particulars of every case were not to be obtained, but the number of cases yielding each figure was sufficient to guarantee accuracy for round numbers.

greatly advanced, and by the publication of competitive designs what might be called a tradition was growing up as to certain classes of buildings. He quite agreed that harm was done to young architects by the gambling spirit; it opened visions before them which would take them away from their general work, and was deleterious to them; but, on the other hand, a young man, when he commenced practice, had generally a good deal of spare time, and his hours were not represented by golden guineas. In many competitions, the work in the preparation of designs was being largely reduced, and now the labour and the cost of such preparation need not be very great. For a capable assessor to arrive at the merits of a design, a very slight sketch plan was all that was required, with a certain amount of detail in elevation. He never heard of a case where the clerks were offered twice or three times their salaries for the preparation of designs in the event of the competition being won, and he was sorry that Mr. Creswell should be able to say so. With regard to the public generally, take the case of a competitor for a public building—for most competitions were for public buildings, and it would be a misfortune if it became the custom for the private house to be put out to competition—where the committee had architect friends. What better way could be devised for the selection of a design than by inviting four or five gentlemen to compete, or by having a public competition? He did not think that a small committee would do better if they employed one of their friends than if they had a competition. At present all architects charged the same for their work—the youngest and the most experienced, and it was a matter of surprise to him that under those circumstances young men got work to do at all. It was a pity, perhaps, that experienced architects did not increase their fees. As it was, young men had extreme difficulty when they first commenced to practice in getting work to do, especially if they were ambitious for public and important work. There was a certain amount of pleasure which a young man must feel in preparing designs for a large scheme, in which he could give scope to his imagination; and that should not be ignored. He thought the remedy for some of the evils of competitions was to be more careful as to the conditions; and if they were not satisfactory, to object before, rather than after, and if their objections were not satisfactorily dealt with, to abstain from competing altogether. If this were done, it would greatly strengthen the hands of the Institute, and lead to the improvement of the conditions. The more particular architects were, the fewer competitions there would be, and those competitions on a large scale would be more fairly conducted than at the present time. There were strong indications that the system of competition was not so much in public favour as it used to be; indeed, there were signs that it was dying out. If architects wished for that result, there never was a better time than the present for bringing that about, and never a better time for concerted action to insist upon conditions being fairly and properly laid down.

Mr. E. W. Mountford, in seconding the vote of thanks, said he thought Mr. Creswell had overstated the cost of competitions to the younger men, as well as the harm that they were likely to incur from them, because, as Mr. Webb had said, a young man's time was seldom so fully occupied as he might wish. If an architect could get enough work without competitions, he would do well to leave them alone; but even then most young architects had to be content with small works. A man of ambition considered it a privilege to prepare a design for a large building even when he knew that he had practically no chance of ever carrying it out. Moreover, he must benefit largely from such preparation, supposing he took the necessary care in working out his designs, and visited other buildings of the same kind. That would teach him a great deal which he would not otherwise learn. If architects would compete for buildings where the instructions were obviously absurd and unfair, then they must take the consequences; and, unfortunately, men were to be found ready to compete for any kind of building, and under any conditions which might be issued. He and other architects were recently invited to compete for a building which was to cost 1,100*l.*, and he thought that if a man would compete for that he would do so for anything. A good deal lay with assessors. An assessor should be a man who had had considerable experience of the kind of building for which the competition was being held; and he did not think it right for a man whose practice had been confined entirely to private houses, for instance, to undertake to be a referee in a competition for a technical institute, or for any buildings of whose special requirements he was ignorant. Assessors were generally thoroughly up to their work, and acted to the best of their ability; but he thought that if they were selected with more care, and if the competitors were to insist upon knowing the selection before competing, there might be fewer unsatisfactory results than at present. One improvement in competitions had undoubtedly taken place; one did not now hear, as he did in his younger days, of dishonest decisions by referees. They had almost got beyond that, though one did occasionally hear of a referee carrying out the building himself. Generally speaking, there was very little cause for finding fault with the decisions, and it was evident that an improvement in architecture had been the result of the system. Probably, the two most important classes of buildings for which one never heard of competitions were theatres and public houses, which, though mostly costly buildings, were generally very unsatisfactory from an architectural point of view. In regard to committees, if it were left to an ordinary committee to select an architect to carry out a small public building, the result would generally be less satisfactory than if a competition had been held. He was of opinion that competitions were not entirely evils, although they undoubtedly had a bad side; but, on the whole, they had resulted in better buildings and better work generally, while young architects had opportunities of doing good and important work which would be denied them if competitions were entirely given up.

Mr. F. T. W. Goldsmith said that it had always seemed to him that the "grocer man" was more to be pitied than blamed, for he was called upon to embark upon a competition scheme for the successful carrying out of which he had not the necessary knowledge. The conditions of a competition, too, were very often issued by an almost equally inexperienced town clerk, who was sometimes also scornfully ignorant of architecture. It had always seemed to him that the Institute or the Association might very usefully be brought into touch with the promoters of competitions at the inception of the schemes—before they were advertised in the public press—because he thought if that could be done some official assistance might be usefully offered, and the good results which would follow would be very widespread. It had been suggested to the Competitions Committee of the Institute that some system should be inaugurated by which representatives of allied societies should be empowered to take notice of any competition that was being discussed or suggested by local bodies and communicate any information direct to the Institute. Already that suggestion had been acted upon, and it was hoped that better conditions would be issued. If some system of the kind could be generally adopted, it would, with the co-operation of an assessor, result in decided improvement. Already the Institute Committee were communicating with the promoters of any competition which was advertised in the professional journals, but they were frequently too late, for, in most cases, when the conditions were once issued, no amount of suggestion would alter them, except, perhaps, at the strongly expressed desire of the assessor. Quite recently it was announced in an advertisement of a competition that an assessor "may be appointed." Representations were made to the advertising body, and subsequently the objectionable word "may" was omitted, and it was now decided to engage an assessor. If promoters of competitions could be induced to publish the assessor's name at the time of advertising, it would give more interest to the competition. Unfortunately, cases were known of assessors, members of the Institute, acting in the capacity of referees where the conditions were not in accordance with the "Suggestions" of the Institute, and he felt sure that such a course must result in harm. Pressure ought to be brought to bear on an assessor to induce him to insist that all the conditions of a competition should be sent to him in the first instance, and his willingness to act should be conditional upon his approval of these conditions. If this were done, there was some reason to hope that competitions would be decided more or less according to the assessor's award, and where this was so he did not see how public buildings in this country could suffer architecturally or otherwise, and if members of the Association and the Institute were to co-operate in this direction he thought that the criticisms of the lecturer could not be made with the same effect ten years hence.

Mr. Beresford Pite, in supporting the vote of thanks, said he thought that the lecturer stood no more chance of succeeding in impeaching the profession than Edmund Burke's friend would have done in impeaching a nation. Matrimony had been defined as an insane design to provide bread and butter for another man's daughter; and it was the same sort of insanity that lead architects to provide designs and plans for any one who chose to ask for them. Connected with the Baptistry Gates at Florence, the competition for which was won by Ghiberti, Brunelleschi, who had also competed, went afterwards to Rome and there studied the Panthenon and evolved the dome of the Duomo, which was also, he thought, the result of another competition. Competitions were often useful and delightful, and they served a number of purposes to an earnest designer, though they did not to the public. There was the delight of merely designing a big building, for architects were people who built castles in the air; and to imagine one's self erecting a building which was to cost several hundred thousand pounds was a delight in itself—such as the Phœbe Hearst Buildings, in California. Competitions cultivated the faculty for design, which architectural students did not sufficiently practise; a certain amount of knowledge and facts were acquired, and, in designing, the tap of Gothic or Queen Anne was turned on, whether for a library or for a stable. The best advice to offer a student was to take a particular class of building and work at it—church, or hospital, or institute—and to master the art of design by perpetual study. The knack of winning competitions, which some members of the Association possessed, was solely acquired by study and persistent practice. The competition system had, beyond any doubt, been improved. It must not be forgotten that Mr. Aston Webb was the co-secretary with Mr. Cole Adams of the Memorial Committee, and the improvement to which he referred was largely due to them. The lecturer had stated that in half the published conditions of competitions the assessor was named, and this was a very decided improvement upon the days before the Memorial. Another improvement in competitions was noticeable in that before the days of the Memorial, greater difficulties were experienced with parsons over ecclesiastical buildings than with the "grocer man" over "corporation" buildings. They were effecting improvements by degrees, but it should be recognised that competitions should be made more public The exhibition of the designs should be insisted upon persistently; the absurdity of the fact that the first premium offered was merged in the commission ought to be advertised a little more generally; and the sum of money which was facetiously offered as a first premium ought to be added to the other premiums or divided among, say, six competitors, instead of putting a second and third in order, which was absolutely useless. In regard to the system of assessors itself, he had a radical suggestion to make. If the assessor worked without a fee, one would be appointed in every competition, and, as the gentlemen who were generally accepted as assessors were, he imagined, above the need of pelf, they might very well be induced to accept the position, as the honour indeed that it was, for the benefit of the profession, without payment. He would like to suggest that the Institute should be prepared to offer the services of assessors to competition committees gratis, on condition that the Institute had the opportunity of issuing the conditions. Why should not the Institute Competition Committee undertake the adjudication of the competitions? Failing that, let them do away with the assessor altogether, and as competitors, subject to the conditions being such as they approved, insist upon having the award of the competition in their own hands. He thought that men who had worked out the problem of a competition would be those best qualified to decide upon the merits of a design. There was enough honesty among members of the profession to recognise and acknowledge the good points in designs other than their own. One other advan-



GROUND PLAN
Malvern College Chapel.

tage for the competition system was that it separated the able men from the duffers. Competitions also had an inspiriting effect upon the inner life of an office. They were, as it were, nurtured on students competition by the Institute, and he supposed they would continue to compete, notwithstanding what had been said against the practice.

Mr. C. H. Brodie said that he would suggest to Mr. Pite that the good which could be derived by young men in preparing competition drawings could be equally well obtained in preparing drawings which were not for competition. The same good to an architect would follow if the drawings were made conscientiously ; and he contended that in sending them in, an architect was helping to degrade the profession. He did not think that Mr. Webb had grasped the conclusion of the paper, which was an appeal to young architects not to go in for competitions ; though, as they must all know, such a request was perfectly futile. One of the strongest instincts of man was that of gambling, and as competitions were nothing more nor less than gambling, the system would continue. If this were not so, drawings would be made for the sake of study and enlightenment only.

Mr. G. H. Fellowes-Prynne said they had heard that evening two extreme views in regard to competitions, and he did not think that they could have had better exponents of one side than the two most successful competition winners the Association had amongst its members, viz., Messrs. Webb and Mountford, and at the same time all must appreciate the clear and able manner in which the manifest disadvantages of the present system of competition had been put before them by Mr. Creswell. As to the gambling spirit referred to, he thought that it did not exist so much amongst young men, who were usually striving for an honourable end. The designs for such buildings as provincial town halls, churches, &c., were often not made in the office of the local architect, but in London, by men who were badly off, and the local architect had the credit of carrying them out. He, the speaker, was called upon about two years ago by a man who had not the necessary knowledge, and asked if he would go into a competition, half and-half, for a church. That showed the condition at which professional men sometimes arrived. He hoped that some good result would follow the paper. Competition as competition could not be condemned wholly ; it existed in every branch of work in art. Work for the Academy was in a sense competitive, and there was no objection if competitors made true art the object of their efforts, instead of only monetary considerations. Nevertheless, one simple fact had to be faced, that, generally speaking, the individual members of the profession were poorly off, and had to work very hard for their living. In regard to premiums, he thought it was only fair that some should be offered, and, if possible, divided amongst a larger number of the competitors. Competitions might have evils, but if men of experience were chosen as assessors he thought the objections might be endured.

The Chairman, in putting the vote of thanks, said that he was glad to hear Mr. Mountford say that in recent years there had been very little cause to complain of the judgment of assessors, although that was not exactly his own impression.

Mr. Mountford : I said "no cause to complain about honesty."

The Chairman, resuming, said it was important that assessors should be above suspicion, although he did not know whether that was altogether the case. In regard to the question whether the name of the assessor should be published, he thought it was going a little too far to say that unless the name were obtained they would not compete. He thought that in many cases it was a decided disadvantage to know who the assessor was to be. In cases where it was known a large number of competitors strove to make their designs in the style adopted by the assessor ; and that was a misfortune, since it was mere imitation. Mr. Pite's suggestion as to a free assessor was a very radical one, and he did not suppose that competitors as a rule would disagree with it, especially as it would result in having assessors in all competitions, for it was a question of expense whether they were appointed or not. He was afraid that leading architects who had so much to do would not be able to give their valuable time for nothing, while the subject of competitors being their own assessors had been mentioned before, and a good many competitors considered the idea was a good one. He thought so too, although it would be impracticable in some cases. It would apply to a town or place where a competition was limited to the competitors there ; but suppose the competition were in the provinces, and a number of competitors from a distance sent in designs, would they care to go to the expense and trouble of travelling to the town for the purpose of voting upon the designs ? And unless a large number of the competitors recorded their votes, a little ring might be got up and the affair settled in an unsatisfactory way. He was interested in what Mr. Fellowes-Prynne had said in regard to competition-mongering, and he might say that they would all be glad if that sort of thing were put down. The practice was not confined to public competitions, and it was a great misfortune that such things should be. Mr. Creswell had referred to the question of economy of competitions, and he, the Chairman, did not agree with what he said as to cost, and he thought that the lecturer's calculations were exaggerated. Architects were principally to blame for great cost, but although, as Mr. Webb had said, a great deal of labour in the preparation of plans was unnecessary, the fact remained that architects did go to a good deal of expense and trouble in preparing competition drawings. Where assessors were engaged it was a great mistake to throw time and money away upon elaborate drawings, when what was necessary could be done much more simply in another way. He would like to see the work cut down, and that could be done if the conditions of the competition were properly looked after. He was glad to hear that the Institute Competitions Committee was an active one, though he must say he did not think it was quite as active as it might be, and that where competitions were unsatisfactorily settled some authority should be prepared to take up the case of aggrieved competitors. If they could get the assessor question settled in a satisfactory way great improvement would be brought about. He thought that something material had been done in the last twenty years to improve the character of competitions, since assessors were very frequently engaged now. The system was not perfect, but it was much more so than it was before the Memorial was presented by Mr. Street.

The vote of thanks having been put to the meeting and carried unanimously,

Mr. Creswell, in the course of a brief reply, said that great improvement had taken place in regard to the appointment of assessors. In 1872, when the Institute Committee drew up their conclusions, they found that assessors were rarely appointed, whereas now, in more than half the competitions, there was an assessor ; which made it the more deplorable that there was not more substantial benefit from the work they did.

The Chairman announced that the next meeting would be held on May 6, when a paper would be read by Mr. W. Eckstein on "Interior Lighting" (reflected lights), and another by Mr. Tom Ekin on "Electric Light as Applied to Architecture."

The meeting then terminated.

Illustrations.

ST. GEORGE AND THE RESCUED MAIDEN.

THIS large group, in bronze, occupies the central position, facing the entrance door, in the octagon hall at the Royal Academy. Mr. H. C. Fehr is the sculptor.

It is a finely composed group ; the treatment of the armour, so suitable for bronze sculpture, is very effective, and the attitude and countenance of the knight dignified. The jarring note, to our thinking, is in the rather commonplace exhilaration of the woman, who can hardly be accepted as the traditional "princess," and whose expression and manner suggest a game of romps rather than the thankfulness for delivery from death. But in a decorative sense the work is quite a success.

NEW CHAPEL, MALVERN COLLEGE.

THE College at Malvern, built some thirty years ago, has, up to the present time, had no detached chapel, part of the upper floor of the south wing having been used for that purpose.

The new chapel is built parallel to this wing and about 50 ft. south of it.

It is planned to seat 444 boys, besides masters and visitors.

The walling is of Molton stone with Bath stone dressings, with which material it is also lined.

The contractors are Messrs. Collins & Godfrey, of Tewkesbury, and the architects, Sir Arthur Blomfield & Sons.

The drawing is exhibited at the Royal Academy.

UPPINGHAM SCHOOL, RUTLAND.

THE new buildings at Uppingham School will complete a quadrangle which was begun by Mr. Jackson in 1889 with the erection of a new school house for the headmaster and thirty-four boarders, and some additional classrooms.

This building formed two sides of the quadrangle, of which the third was enclosed by Mr. G. E. Street's classroom. The new block which is shown in our illustration fronts the town street, and forms the fourth side of the quadrangle. It contains a gateway, tower, and porter's lodge, with a museum and science schools to the left, and classrooms to the right of it. At the extreme left is a lecture theatre.

The new science schools and museum and the new tower were inaugurated on December 3, 1897, by H.R.H. the Duchess of Albany, who at the same time unveiled a bust of the Queen, by Mr. Lucchesi, which is placed in a niche in the museum.

The general contractor was Mr. Halliday, of Stamford, the heating and ventilation are by Messrs. Haden & Son, the fireproof floors by Messrs. Homan & Rodgers, and the laboratory fittings by the North of England School Furnishing Company; the gas work is by Messrs. Strode & Co. Mr. C. Turkentine was clerk of works.

Over the great gateway is a statue by Mr. G. Frampton, A.R.A., of Archdeacon Johnson, who founded the schools at Oakham and Uppingham in 1581.

The drawing is exhibited at the Royal Academy.

DECORATION OF A CHAPEL.

The chapel of which the sections and plan are shown in the illustration, is now of unpainted plaster. The plaster below the entablature is to be cut down and the walls lined with polished Cipollino marble with a black marble skirting, the door dressings and overdoors are to be of the breccia sanguinea of Numidia, with black marble panels in the overdoor, the lower panel of which is to be inscribed and gilt. The archivolts and imposts are to be gilt, and the key-stones and trusses bronzed, the entablature is to be coloured and gilt with a gilt inscription on the dark blue frieze, and the pendentives, the dome, and the lantern are to be ornamented with painting and gilding. The architect for the work is Professor Aitchison, R.A.

The drawing is exhibited at the Royal Academy.

NOTES ON THE CONSTRUCTION OF TOWN BUILDINGS.*

I PROPOSE to consider town buildings from the point of view, (1) of construction, (2) of materials, and last, but not least, of cost.

For dealing successfully with buildings like city banks, offices, warehouses, showrooms, and schools, regard must be had to—

1. Ample lighting to all parts;
2. Simplicity of plan and arrangement;
3. Good means of ventilation and warming;
4. Good sanitary accommodation and drainage;
5. Protection as much as possible from fire; and
6. The employment of suitable materials for the purposes for which the premises are intended.

I know full well how the difficult limitations of confined situations, poor frontages and numerous awkward angles, sites dominated by ancient lights and surrounded by defective party or other walls, militate against the realisation of ideal requirements; but it is exactly at this point that the experience of a professional man comes into play, and gives him his opportunity of showing how all these and many other difficulties may be overcome.

Construction.—How far do modern methods of construction forward these objects?

I have no hesitation in saying that upon the whole they do so to a very large extent. In former years town warehouses were built with extremely thick walls, floors of low elevation, with die square timber uprights and wooden beams supporting them, low windows with cast-iron frames, and basement floors laid on the ground, with no provision for keeping back damp, and with no proper sanitary arrangements. As for their external appearance, the least said the better. Doubtless there are many such buildings remaining in Manchester, as there are in the City of London, especially that part of the City near to the river. What is the case, however, to-day? All well-designed warehouses are built with as little unnecessary brickwork as possible, and with no internal walls where they can possibly be avoided; with floors of fair height and unencumbered by posts or columns as far as is practicable, and with proper lavatories to the open air in more than one floor of the premises. . . .

Our fifth requirement as named above (the protection of a building from fire) opens up the extremely large subject of what is a fireproof building, and with it the laws and regulations under which we have to work. This subject will be fully dealt with in the paper which Mr. Blashill has prepared for this meeting,* but I may be permitted to refer to it very briefly here. In London we practitioners have all been sent to school again in a large measure by the passing of the London Building Act of 1894, which came into operation on January 1, 1895, and superseded the Act of 1855. A short reference to the new Act as it affects the construction of buildings, will, I hope, not be out of place here. Buildings under this Act are classed under four heads:—

Dwelling-houses, domestic buildings, public buildings, buildings of the warehouse class. Among the regulations set forth, applying to "domestic buildings" erected after the commencement of the Act, Section 43 provides for sites which have been occupied by a domestic building (at any time within seven years previous to the commencement of the Act) by giving power to erect a new building on as much land as was previously occupied, if drawings of the previously existing building have been duly submitted to and certified by the District Surveyor. This section, I think, is of considerable advantage to building owners, as the District Surveyor's certificate is taken as conclusive evidence of the correctness of the plans, and therefore of the old buildings existing upon the site.

Under Section No. 47 no building is to be erected to a greater height than 80 ft. without the consent of the Council. Looking to the great height of modern structures, I think this regulation is a reasonable one. High buildings in towns create cold, draughty, and sunless streets. One of our finest improvements in London, Northumberland-avenue, always appears to me to be spoilt by the excessive height to which buildings have been carried up on either side of it. I regret I have not seen American cities, but the impression given one by photographs is that the extreme height of their buildings does not help either their architectural beauty or their convenience. I believe the wide streets and low houses in East London and the suburbs of the large provincial towns, which allow of the free circulation of air and sunlight, add very materially to the general healthiness of the inhabitants.

The sections of the Act relating to cubical extent of buildings and the uniting of buildings are interesting:—

Buildings of the warehouse class are not to exceed 250,000 cubic feet unless divided by party walls, unless the sanction of the London County Council be specially obtained, and even then the area is not to exceed 450,000 cubic feet. If two or more buildings in one occupation exceed the cubical area above named, they can only be united by openings 7 ft. in width and 8 ft. in height, such openings being fitted with two wrought-iron doors, each ¼ in. thick in the panel, at a distance from each other of the full thickness of the wall.

The Fire Offices Committee's Regulations exceed the requirements of the Act by insisting on chambers at least six feet in the clear being built in brickwork, with, of course, solid roofs and floors, and iron doors fitted to these. After a careful survey of the recent great Cripplegate fire, I am convinced that both the Act and the regulations above named should be varied as regards these iron doors. If openings are allowed to be made at all in a party or two external walls (and it would be a great hardship if they were not), the opening part when closed should be made fire-resisting as much as is possible, and this will never be so with such thin doors as above described. Over and over again fire has got through these doors, and better fire chamber doors should, in my opinion, be always specified.

The plans on the screen of a large series of warehouses and show-rooms I have just completed in Aldermanbury, City, show numerous connexions as described above, but I have fitted these openings with expensive fire-resisting chamber doors made by Messrs. Chatwood & Son, and I believe these doors will resist fire to a much larger degree than those which would have satisfied the Surveyors of the London County Council.

I have seen a copy of the Manchester by-laws, and I do not discover in them any provisions regarding the size of warehouses, and I am sure we shall all be interested to hear if I am right or not regarding this important point.

Section 78 deals with the construction of public buildings, which must be to the satisfaction of the District Surveyor, with powers of appeal in the event of disagreement to the Tribunal to which our Institution nominates a member, and all the members of which are connected with our Society.

The seventh and eighth parts of the Act I have not time to refer to in detail, although the latter part, defining the rights of building and adjoining owners, is important. Several new powers are given under this part in addition to those in the 1855 Act; amongst others the power to deal with party fence walls, the underpinning of adjacent premises (within 10 ft. of new buildings) upon terms, and these are, in my judgment, distinct aids to the building owner.

In the second schedule to the Act the materials are described which, for the purposes of the Act, shall be deemed to be fire-resisting, and among others we find that oak, teak or other hard timber not less than 2 in. thick is allowed for doors and stairs with 2 in. risers, and concrete composed of broken brick, stone chippings or ballast, and lime, cement or calcined gypsum, when used for filling in between joists and floors.

I trust you will forgive me for trespassing upon your time with this very imperfect reference to a very important Act, but I feel it is the outcome of much thought and care, and applies to the construction of buildings in the largest of cities, and that it bears so directly upon the question of protecting property not only from bad building but from fire. We, as members of this Institution, shall always look back with pride to the part it took in the evolution of this Act of 1894. Not only did we spend nearly 1,000*l.* in so doing, but three members of our Council—Mr. Steward, Mr. Cubitt Nicholls, and Mr. Garrard (the latter two gentlemen, unfortunately, now no longer with us)—gave upwards of thirty days' gratuitous attendance in the Committee Rooms when the Bill was in Parliament.

The great fire in St. Mary Axe a few years since, and the still greater a few months ago in Cripplegate, prove that there is still much to be done towards preventing such awful calamities in the future. The great lesson, I think, to be learnt from both of these fires is that ironwork, unless cased, is the most destructive of all agents when subjected to great heat, for columns and girders twist, buckle, and contort themselves into every conceivable shape, and by so doing wreck the premises they are designed to support.

I think it is a question deserving great consideration whether we should not omit from the external walls of buildings all hidden steel or iron girders and stanchions, and make these walls deal walls, capable of supporting themselves. We should be returning to a much simpler and, I believe, safer method of construction, and the space required for thicker walls or piers of brickwork should not be grudged when necessary for the safety of the building and the surrounding property.

If I am correct in this statement, many of the warehouses and showrooms built within quite recent years would come under this dangerous class. After the days of the old brick and timber structures, cast and wrought iron came to be largely used, often exposed, and there-

* A paper by Mr. Howard Chatfeild Clarke, taken as read at the Manchester meeting of the Surveyors' Institution, on Wednesday, the 20th inst.

* Printed in our last issue, page 391.

fore formed an element of danger and risk from fire. After a heavy fire like the Cripplegate one, it is useless, in my opinion, to suggest much wider streets in future, and fewer and less crowded buildings. The conditions of a town make this impossible, but it is possible to materially decrease the risk of fire by insisting :—

1. That all party walls are carried up, say, at least 4 ft. above the slope of the roofs.

2. That all iron doors in party walls are of a much better description than now specified in the Act.

3. That all ironwork, both that exposed and all girders not exposed, are cased with plaster at least ½ in. thick.

4. That party walls dividing skylights from adjoining buildings are carried up considerably higher than at present.

5. That external iron shutters are used in confined well-holes and areas overlooked by premises in several occupations.

In the warehouses in Aldermanbury (shown upon the screen) I have caused every piece of ironwork to be cased with plaster; and, with the fireproof chambers as described above between the various premises, I believe if one portion were alight there would be a good chance of saving the others.

One word regarding so-called fireproof floors. Their name is legion, and although I do not profess to have used a tithe of the various patents, I have used many, and believe a floor filled with good clean coke breeze, mixed in the proportion of five of breeze to one of Portland cement, makes a very rigid, light, and fire-resisting floor. I have drawn out details of such a floor, but I know there is nothing new in it.

To the construction of buildings such as banks, flats, offices, I think the leading requirements we have been considering in detail equally apply, but their actual construction must follow upon the special requirements of each. I always feel proper lighting to be the most important point. Some years back I commenced to use a special shaft for the lighting and ventilating of basements, trimming the ground floors generally in its darkest parts to enable this to be done. If the walls and slopes are built in white glazed bricks, I find that these areas make the parts near them in the basements practically as good as ground floor offices. The carrying up of all windows in town streets into the floor above that in which they are situated, and trimming the floor, has a most advantageous effect upon the lighting of premises, and often saves the loss of valuable space caused by the introduction of central well-holes through the various floors. Iron skylights and internal glazed partitions made in metal are also among more modern conveniences for properly lighting our buildings.

With regard to the proper ventilation and warming of buildings, both large and small, I feel we have still much to learn. I think it is generally admitted that when an amount of fresh air is introduced into a chamber, adequate to change the air thoroughly, draughts are almost unavoidable. The only simple remedy appears to me to be to distribute the inlets as much as possible, not to introduce them at too low a level, and to fit the apertures to them with metal or wood tops with conical-shaped holes, thus diffusing the air. With electric and other forms of fans for extracting vitiated air, this difficulty is largely overcome. For an ordinary room there is no better ventilation than the old-fashioned double hung sash, especially when it is fitted with a deep sill-board for the admission of fresh air at the meeting rail level. Grates fitted with warm air-chambers are a great boon both for winter and summer use, and are largely fitted in London, especially in the Board schools. The "Plenum" system, so much in use in the Midland Board schools, is doubtless also used here in the north. There is no doubt it is more costly to introduce in the first instance, but it ought to be economical in working as regards fuel. The great drawback appears to be the necessity for the constant attendance of the caretaker to regulate the supply of heat required in the various rooms.

My fourth requirement of good sanitary accommodation and drainage is a most important one in the construction of a building, and I believe it has never received the attention it is receiving to-day. The old fashion of laying drains at the last moment anyhow, and practically with any sized pipes that could be easily obtained, has given place to drains properly laid, easily accessible, well ventilated, and generally made of glazed stoneware. I believe we all owe a great deal to the late Sir Henry Doulton for inventing—certainly for bringing to perfection—this simple but most useful material. The result of the improvement in drainage is shown in the health of the community, as although our large towns increase so rapidly year by year the general health is good and the death rates low. The use of iron pipes under dwelling houses has many advantages, the main one, I think, being that the number of joints, and therefore the number of causes for trouble, are largely done away with. The great want of public conveniences is at last receiving proper attention in London, and large, airy, and well-ventilated underground conveniences are now being erected by the London vestries, fitted with automatic flushing tanks and the most cleanly of all urinals, the "Stall" urinal. There is still in London strong opposition on the part of some of the water companies to allow water waste preventors to discharge more than two gallons. I am convinced from practical experience that this is not enough water to properly flush traps and drains, especially with certain forms of hopper closets, and my opinion is that three-gallon tanks should be in universal use, and that the companies should be compelled to supply water by meter to all public buildings.

The increased use of hot water is a source of trial to even the best lead wastes, and I find that strong iron wastes obviate much difficulty and prevent buckling.

I have already considered fully the fifth requirement, viz., the protection of a building as much as possible from fire. The last requirement, viz., the use in construction of suitable materials, alone remains to be considered. In towns, brick, stone, and terra-cotta, with a limited use of granite, are our main materials for external walling, and there is a better selection now of any of these materials to choose from than ever before. In town buildings the use of glazed bricks is of immense advantage, not only on account of their reflecting surfaces externally, but their sanitary properties internally. The manufacture and use of faience is also one of the greatest modern improvements giving room for artistic treatment both externally and internally, with a thoroughly practical material as regards resistance to dirt, and otherwise. The decay of the stone used in the erection of buildings in towns is a serious problem, and points to the necessity of protecting the material as much as possible from the atmospheric influences which attack it. This can partly be done by carefully jointing and covering exposed cornices and strings with thin lead, but the plain surfaces should be covered with "fluate," or some similar solution, to further protect them. I am sure we must all be glad to see the further introduction into this country of granite, the most suitable material for many reasons for the erection of our town buildings. I have not time to describe in detail the many additions to our decorative materials for internal use, but the selection is large, and I should say never better than to-day. The cost of building fluctuates to such an extent that it is difficult to give reliable figures; but I append the cost per foot cube of some premises I have recently erected.

There are two very important classes of buildings which time has prevented my describing, either of which would supply material enough for a separate paper. I refer to schools and to dwellings for the working classes. The limited areas in cities has naturally forced architects to design schools in three floors, and hundreds of these are built throughout large towns, and upon the whole answer well. There must be, however, a considerable amount of time wasted in reaching the upper floors, and if the site will only permit I believe a separate building for the infants' department and a two-story building for the girls and boys answers very well, and will be found to be rather cheaper in execution. I have lately completed a school of this description for over 1,400 children in a London suburb, and the cost of this building, including all boundary walls, cookery kitchen, manual instruction-room, caretaker's cottage, &c., works out at 14*l.* 10s. 3d. per child. The school is finished with glazed brick dados and buff bricks above throughout, and, little plastering, except for ceilings, has been used. I trust we shall hear in the discussion your views respecting this important class of buildings.

Regarding the housing of the working classes, immense strides have been made in London during the last thirty years, and many of the City Companies as well as the large trusts, such as the Peabody and Guiness, together with public companies, have done noble work in erecting healthy and well-built and well-lighted premises. During the last few years the London County Council have commenced to build this class of property, and I am bound to say I think their action in so doing has rather stifled and strangled private enterprise. The Council up to December last had spent over 387,000*l.* in erecting dwellings of this description, providing accommodation for 6,600 persons, exclusive of seventeen shops, 100 workshops, twelve stables, and twenty sheds. As, however, the Council are content if they see a return for their outlay of 3 per cent., I feel you will agree with me that, whether they are right or wrong in so using the ratepayers' money, they practically shut the door to private enterprise upon the same basis. The Guiness Trustees in their report of last year put the capital of their fund at 289,456*l.*, and state that all their buildings continue to let well; that 7,327 persons were living in them; and that the average weekly rent of each room was 2s. 1½d., which includes chimney sweeping and the use of venetian blinds, common-room, baths, and hot-water supply.

APPENDIX.

Examples of Cost of Building in London.

Warehouses in Upper Thames-street. Brick front, wood floors, unplastered walls.	Contents 117,600 cub. ft. Cost per cub. ft 7d.
Schools, Campsbourne, Hornsey. Boys' and girls' schools, stock and red brick front, internally walls finished with buff bricks and glazed brick dados, wood block floors and material stairs. Accommodation for 1,400 children.	Cost per cub. ft. 7½d.
Warehouses in Aldermanbury, for wholesale drapery trade. Fireproof floors, stone front, plastered walls.	Contents. 179,322 cub. ft. Cost per cub. ft. 1s. 1d.
City offices in Gracechurch-street. Stone front, fireproof floors, stone staircase, and hydraulic passenger lift, faience entrance and passages.	Contents 204,879 cub. ft. Cost per cub. ft. 1s. 1d.
Residential flats, South Audley-street, Mayfair. Stone and terra-cotta front, electric passenger lift, fireproof floors, stone staircase, each flat finished with hardwood finishings, parquet floors, and enriched plasterwork.	Contents 176,614 cub. ft. Cost per cub. ft. 1s. 2d.

THE SURVEYORS' INSTITUTION.

IN connexion with the visit to Manchester last week of the Surveyors' Institution, a dinner was held on Wednesday evening, the 20th inst., at the Grand Hotel. In the absence, through illness, of the President, Mr. Christopher Oakley, Mr. Robert Vigers, Vice-President, presided, and there were present amongst others the Lord Mayor of Manchester (Mr. Alderman Gibson), Sir Joseph F. Leese, M.P., Sir J. F. L. Rolleston, Vice-Chancellor Hall, the Dean of Manchester, Sir Leader Williams, Colonel Bridgford, and Messrs. Thomas Blashill, John Holden, John Ely (President of the Manchester Society of Architects), C. Bidwell, H. H. Collins, J. W. Fair, A. R. Stenning, A. Vernon, T. T. Wainwright, A. T. Walmisley, Daniel Watney, J. W. Penfold, Hon. Sec., and Julian C. Rogers, Secretary.

The usual loyal toasts having been honoured, the Chairman proposed "The Houses of Parliament," coupled with the name of Sir J. Leese, M.P., who responded.

The Chairman then gave the toast of the "Lord Mayor and Corporation of Manchester," and said that the members of his profession always experienced the greatest kindness in Manchester. Up to the present time the city had shone in the eyes of the world. All their great undertakings, with one exception, had been successes, and in the case of the Ship Canal he was sure it was only a question of time. It was one of the boldest undertakings a Corporation could have ventured upon Manchester was certainly the most progressive city he knew; no other city exhibited the same courage in dealing with large enterprises for the general benefit of its citizens.

The Lord Mayor having replied, Sir John

F. L. Rolleston gave the toast of "The Legal Profession," Vice-Chancellor Hall responding.

The Lord Mayor then submitted the toast of "The Surveyors' Institution." In the course of his remarks he said that the Institution secured a course of training through which a surveyor had to go which enabled him, with something like mathematical accuracy, to determine the value of all classes of property. He was glad that the Institution had honoured Manchester by selecting it as the place of their first country meeting.

The Chairman, in reply, said that the members of the profession felt proud of the Institution, which was the one centre to which they could rally. One object the Council of the Institution had kept steadily in view was the education of the rising generation, and they did all in their power to improve the minds of young surveyors, and enable them to follow with success the profession they had adopted. The pupils who were preparing to follow the profession were superior to those who had become surveyors in the early days. The Institution began in a very small way about 30 years ago, when their affairs were conducted in a small room. They now numbered about 3,000 members.

Mr. Arthur Vernon then proposed "The Counties Palatine Provincial Committee," thanking the County Palatine for its efforts in regard to the meeting, and Mr. John Holden, the Chairman, in particular. In regard to Manchester, great as it was there was still room for improvement: the streets were terribly noisy, and were badly paved, and the people were extraordinarily modest in their ideas as to the architecture of churches and chapels.

Mr. John Holden replied, and subsequently proposed "The Guests," the Dean of Manchester responding.

The Dean then proposed the health of the Chairman, who, in reply, said he greatly regretted the absence of the President, Mr. Oakley.

A hearty vote of thanks was then accorded, on the motion of Mr. Wainwright, to the secretary, Mr. Julian C. Rogers, for his efforts in regard to the meeting. Mr. Rogers briefly replied, remarking that for thirty years, with their hon. secretary, Mr. Penfold, he had been associated with the Institution. He hoped that that meeting was the first of many successful provincial gatherings of their Institution.

VENTILATION OF THE ART GALLERY, BURY.

THE warming and ventilation of this new building has been put into the hands of Messrs. Sutcliffe & Co., of Manchester, who propose to adopt what is known as a low-pressure plenum system of ventilating and warming; and the work, therefore, will be one more illustration of the advance which is gradually being made in England towards the satisfactory ventilation of public buildings. As with many other examples, the warming is to be done by what is called in America indirect acting apparatus—that is, the warm air is raised to the necessary temperature outside the room into which it is to be introduced. The principles on which Messrs. Sutcliffe & Co. carry out their work have been explained in a paper read before the Manchester Society of Architects by Mr. J. D. Sutcliffe, in which, although there is a great deal that is true and trustworthy, there are also some statements and theories to which we take exception. One of these is the argument that because carbonic acid gas is 52 per cent. heavier than air it is therefore desirable to ventilate by a downward current in a room rather than an upward one. The fallacy of this will be obvious to every one of our readers who smokes, if he will notice the course of the smoke after being exhaled. It is almost impossible in an ordinary room to make the smoke go down to the floor without a very violent effort. In all ordinary expulsion it would be noticed that the smoke ascends, and quickly becomes disseminated through the air of the room. The scientific fact is that air exhaled from the lungs is, at the moment of exhalation, equal in weight to pure air at a temperature of 90 deg. Fahr. And until the exhaled air has parted with so much of its heat as to become heavier than pure air at this temperature, it will rise in a normally pure atmosphere. There is no doubt that with the modern idea of forcing in fresh air at a high level, and allowing it to pass out at or near the floor level, the incoming air is likely to traverse the greater part of the lower portion of the room. But the air at the moment of being breathed will be the foulest of which the amount of ventilation given to the room admits. The question, therefore, resolves itself into this: that if the ventilation is sufficiently ample to keep the foulest air in the room in a minimum state of impurity, downward ventilation may be permissible. But if, as is generally the case in England, the amount of fresh air introduced into the room is only a proportion of this necessary minimum, then upward ventilation, combined, of course, with a proper distribution of the air inlets, will render the air that is being breathed the purest of that in the room, instead of the foulest.

Mr. Sutcliffe holds that in any scheme of ventilation the amount of air and the temperature should be under the control of the person or persons occupying the room, and for this purpose he adopts what he calls the double duct system, providing, that is, a cold air supply and a warm air supply to each room, the amount of air admitted from either being under the control of the occupant. There is a good deal to be said in favour of this view; it has, however, the disadvantage that the engineer or person in charge of the central heating apparatus is not usually fully cognisant of the varying demands that are being made from time to time on the heating apparatus. Mr. Sutcliffe mentions the ventilation of the new factory at Coventry for the Pneumatic Tyre Company. This is an example of the method we should like to see adopted in all public buildings: a combination of the so-called plenum and vacuum systems, in which the fresh air is propelled into the room by a fan or fans, and the foul air is drawn out from the room by other fans. This is the only system by which perfect control and entirely adequate ventilation can be obtained, and is that adopted now in the best instances of well-ventilated public buildings on the Continent. It is, of course, the most expensive, but it is also certainly the most effectual, and gives the best value for the money expended. Mr. Sutcliffe lays it down as an axiom that the rate of air motion through the air inlets into the room should not be more than 5 ft. per second. This is, in our opinion and in that of good authorities, too much; and 2 ft. per second is far preferable. Indeed, a current of 1 ft. per second is just perceptible to the skin. So high a rate, therefore, as 5 ft. per second is liable to be unpleasant unless the temperature is very carefully and exactly regulated.

Messrs. Sutcliffe & Co., like many other of their competitors in trade, have patented a form of ventilating-fan, somewhat resembling the well-known Blackman fan; but we very much doubt whether it is possible to devise a form of fan affording good grounds for a valid patent that is superior to the straight-bladed fan with cone centre, which it is open to anybody to construct. In the present state, however, of ventilating engineering a patent seems to be a necessity from a trade point of view. Messrs. Sutcliffe claim that their form of fan runs absolutely quietly. If this claim is borne out by facts, we can congratulate them on having achieved a very notable victory.

ARCHITECTURAL SOCIETIES.

EDINBURGH ARCHITECTURAL SOCIETY.—The Edinburgh Architectural Society met on the 20th inst. to hear a paper by Mr. T. Duncan Rhind on "Sculpture in Relation to Architecture." Mr. A. Lorne Campbell was in the chair. The lecturer, after lamenting the want of sculpture in modern work, and attributing it to the ideas of building committees and the schools of art, traced the history of sculpture in connexion with architecture, claiming that that was its highest branch. Mr. Rhind praised the present French school and system of encouraging sculpture.

COMPETITIONS.

JUBILEE CLOCK TOWER, LEWISHAM.—On the 19th inst. the executive committee of the Queen's Jubilee Commemoration Committee for Lewisham met at the Town Hall, Catford, to consider the designs submitted in competition for the clock tower to be erected at the junction of the High-street, Lewisham, and the High-road, Lee, with the result that the design bearing the letters "V.R." was selected. The successful architect was Mr. Gough, of Bristol. The design is for a tower some 50 ft. in height, and 8 ft. square at the base, which will be surrounded by a 3-ft. kerb, forming a refuge. The tower will be built of Bath stone, the facing of the spire only being in freestone, and the backing will be of cement concrete. At the base a medallion of her Majesty is surmounted by the Royal arms, beneath that being a panel for inscription. Columns at the angles terminate in a crown design, as does the central cupola or spire. There are to be four dials, each about 4 ft. in diameter.

ARCHÆOLOGICAL SOCIETIES.

BRITISH ARCHÆOLOGICAL ASSOCIATION.—The tenth meeting of the Session was held at 32, Sackville-street, Piccadilly, on the 20th inst., Mr. C. H. Compton, V.P., in the chair. Some further particulars of the ancient font recently discovered at Bassingham, Lincs., were contributed by the Rector, the Rev. W. A. Matthews, through Mr. J. T. Irvine, accompanied by an excellent photograph. The font has been thoroughly cleaned and placed where it will no longer be overgrown with shrubs and vegetation. A paper by Mr. Geo. G. Irvine upon the very curious church and well of St. Donlough, co. Dublin, was read by Mr. Patrick, Hon. Secretary. The church, situated about eight miles N.E. of Dublin, at one time was the centre of a considerable village of which many ruined dwellings remain. There is also a very good plain granite cross of early type at the cross roads leading to the church. The ground plan of the church is in two divisions, the easternmost being much the larger, vaulted and groined, but without ribs. A modern church adjoins it on the north, from which it is now entered, although there was most probably an external door on that side originally. In a recess formed by one of the windows in the south wall is a very curious staircase leading up to a long room which runs the whole length of the building forming an upper floor. The walls of the church are carried up, forming a square tower in the centre with embattled parapet. The eastern portion of the ground floor is 14 ft. 6 in. to the crown of the vault, but the western portion is in two heights, a priest's chamber occupying the upper part and rising into the long chamber above, where it forms a raised floor of four steps. There are several stairs leading to various parts of the building and to the tower, and the whole arrangement is quaint in the extreme. The church dates probably from the beginning of the thirteenth century, and is one of a very interesting type of buildings peculiar to Ireland. The well is situated to the north-east of the church, and is in character with it. There is also a curious underground chamber, roofed with a circular barrel vault, and approached by a very narrow flight of steps from the ground level. It was probably the baptistry.—Mr. J. C. Gould drew attention to an ancient cross, a holy well, and baptistry, together with an interesting church, at the village of St. Clear in Cornwall, and mentioned that in the tower was suspended a ringers' board bearing some quaint lines.

Correspondence.

To the Editor of THE BUILDER.

WALTHAM ABBEY.

SIR,—May I add a few words to your article of April 2 on Waltham Abbey Church? 1. A great cloud of witnesses, Professor Freeman, Bishop Stubbs, Mr. T. Wright, Mr. W. Burges, and others have attributed the present nave to Harold, A.D. 1062. If so, it would be either Anglo-Saxon or Early Norman in character. It is neither. In scale, design, and execution it is altogether beyond the scope of Anglo-Saxon work. Nor, on the other hand, can it be of the same date as the archaic eleventh century work of the south transepts of Hereford and St. Albans, the north transepts of Chester and Winchester, the west front of Lincoln. A second school asserts that the nave was built at the refoundation of the Abbey for Canons Regular in 1177; this would make it contemporary with the transitional work of Canterbury-Chichester, and Abbey Dore, which is manifestly impossible. The stones and mortar tell their own tale, and that quite unmistakably. It is obviously a contemporary of Southwell nave and the like, built, therefore, in the latter half of the Norman period, c. 1120. In 1120 Henry I. gave Cornmill and Northfields to the Abbey. The author of the "Vita Haroldi" speaks of works going on in the church in 1125 and 1126. There are, moreover, many resemblances

between Durham and Waltham, due to the fact that Waltham was given to Bishop Walcher after he was appointed to Durham in 1071. Durham choir was finished c. 1096. Waltham, like Lindisferne and Dunfermline, is a later copy of it. 2. The triforium, as at Rochester and Vignory, is merely a wall with holes in it. Originally, however, the aisles were vaulted. Traces of the supports of the vault may be seen along the aisle walls. 3. Early in the fourteenth century it was resolved, as at Gloucester, to improve the nave. At Gloucester the two western bays were entirely rebuilt. At Waltham they were not rebuilt, but pier-arcade and triforium were thrown into one story. And as it was probably intended to apply the same process to the whole of the nave eventually, the arcade of each bay of the triforium was taken out, as well as the string-course below it. When it was found impossible to carry out the remodelling of the whole of the nave, this string is said to have been replaced in plaster. And so Waltham has no vault to its aisle, no arcade to its triforium, and no string to its triforium except one of plaster. The cut stone collected from the vaults and vaulting-shafts in the aisles, from throwing into one the pier-arcade and triforium of the western bays, and from the arcade and string of the triforium, seems to have been utilised by the canons in building the new curvilinear façade. FRANCIS BOND.

TRIBUNAL OF APPEAL CASE.

SIR,—We notice that in the issue of the *Builder* of the 23rd inst., on page 397, in the report of an appeal under the London Building Act, 1894, by the Lion Brewery Company, Limited, the solicitors to the appellants are stated to be Messrs. J. White & Leonard. We beg to inform you that we, and not Messrs. J. White & Leonard, are the solicitors to the company, and must ask you to be good enough to insert a correction in this respect. The matter is of some importance, as we have been the solicitors for the company for many years past. The error may have arisen from the fact that Messrs. White & Leonard initiated the appeal under the instructions of our clients' architects. The appeal was, however, prosecuted by ourselves on the company's behalf.

LAYTON, SONS, & LENDON.

BOOKS RECEIVED.

TRANSACTIONS OF THE MONUMENTAL BRASS SOCIETY. Vol. III. Part 2. (John Bale, Sons & Danielson.)

THE ART OF ENGLAND AND THE PLEASURES OF ENGLAND. By John Ruskin. (George Allen.)

The Student's Column.

THE CALCULATION OF STRENGTH OF MATERIALS AND RESISTANCES.—XVIII.

CALCULATIONS for the strength of arches and their abutments may be made either by the use of formulæ or by graphic methods. But in both cases the theory on which the practical calculations are based can hardly be said to be in a very satisfactory state, as the basis which has been taken as a starting point in the theoretical investigation of the statics of arches is that arches are composed of a number of smooth boussoirs which are free to slide upon each other, and very few investigators have taken account of the practical effect that in building, arches are usually put together with mortar or cement between the joints, which, especially when properly set and hardened, has a considerable influence in strengthening the construction. Fortunately, the error, if any there be, in the theory, is on the right side, and the point which is not taken into consideration adds to the strength of the construction instead of detracting from it. We may, therefore, content ourselves with accepting the formalæ and methods which have been arrived at.

In order that an arch may be stable, it requires to be sufficiently strong in several particulars: first, the pressure upon the arch must be met by a sufficient resistance from the arch to prevent the arch losing its true form by rising at one or more parts, and sinking at other parts. This, in theory, is the manifestation of certain of the voussoirs turning upon either their inner or outer edge. It results from insufficient depth in the arch from extrados to intrados, and is intimately connected with the curve of pressure or line of resistance—terms which we shall hereafter explain; second, the pressure upon any part or, in theory, any joint of the arch must be less than would be sufficient to crush the material of which the arch is composed; third, the abutment must be sufficient to resist the thrust of the arch.

The form of the arch has a considerable influence upon the manner in which it will be likely to fail if the first of these essentials is not sufficiently fulfilled. A semi-circular arch is most likely to fail by the crown falling in and the haunches rising; a pointed arch, on the other hand, is more likely to fail by the crown or apex rising and the haunches falling in. A straight arch is most liable to fail by sagging or falling in by the voussoirs sliding upon each other. As a matter of practical building, therefore, a semi-circular arch should be used when the load on the haunches is great and that on the crown is small. A pointed arch should be used when the load on the apex is great and that on the haunches comparatively small.

The following formulæ are used for determining, with more or less accuracy, the proportion of the parts of an arch; $D = C\sqrt{R}$, where D is the thickness at the crown, R the radius of the arch at the crown, and C is a constant whose value is given as ·3 for stone, ·4 for brick and ·45 for rubble. This formula is said to be applicable when the arch is not less than 40°. In the case of a straight arch with radiating joints the formula is altered to

$$D = \cdot 45\sqrt{s} + \frac{s}{12}$$

where s stands for the span of the arch.

Another theory gives

$$D = \frac{\sqrt{R + \frac{s}{2}}}{4} + \cdot 2 \text{ ft.}$$

This is said to apply for first-class workmanship in cut stone. If the work is of less careful description, this depth should be increased by about one-eighth part, and for brick or rubble about one-third. In all of these examples of formulæ it will be noticed that no difference is made by the formula whether the load upon the arch be small or great, live or dead; they can, therefore, be regarded only as approximations to be afterwards tested by more careful calculations. We have also some empirical formulæ for the thickness of the abutment, thus:—

$$T = \sqrt{2P + \left(\frac{A}{H}\right)^2} - \frac{A}{H},$$

where T is the thickness of the abutment, P the horizontal thrust, which is considered to be nearly equal to the weight of that part of the arch between the crown and an angle of 45 deg., A is the area of section of the half arch, H the height of the abutment to the springing. This is a more logical formula than those we have quoted above. Another formula for the abutment is more simple, but less logical. It is:—

$$T = \frac{R}{5} + \frac{r}{10} + 2.$$

Here R is the radius in feet, r the rise in feet, and the resultant thickness of abutment, T, is also in feet. This is said to apply when the height of the abutment does not exceed one and a half times its base.

For practical work it is more satisfactory to adopt a graphical method of estimating the stresses in an arch. If we take for the purposes of investigation any voussoir, A B C D, of an arch, as in Fig. 1, it is clear that such voussoir, when in equilibrium, is so kept by the united action of three forces, which are, first, the load on the voussoir, in which its own weight should be included, and which will be acting vertically downwards through the centre of gravity of the voussoir and its load; second, the pressure upon the upper surface, C D, of the voussoir, of the load brought by the part of the arch (with its load) immediately above it; and, third, the resistance of the voussoir or abutment on which the lower edge, A B, is resting. These forces in our diagram are indicated by dotted lines and arrows.

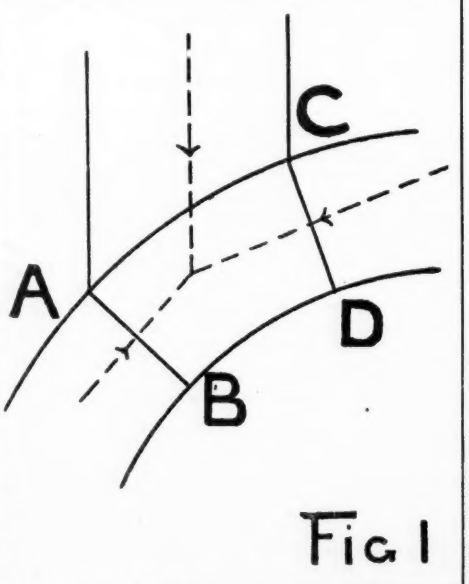


Fig 1

In the case of each voussoir, the resistance of the voussoir below it becomes, when we investigate the next voussoir downward in the series of which the arch is composed, equal and opposite to the pressure exerted by the part of the arch above, as at the joint A B, and since in each voussoir the pressure brought upon the upper joint by the load of the arch above it is modified by the action vertically downwards of the load upon the voussoir, it will be at once seen that the lines representing the pressure brought by the parts of the arch to any voussoir in the series are gradually approaching more and more nearly to the vertical as we deal with each successive voussoir. And if we divide the arch into a very large number of very small voussoirs these deflected lines would be each of them very short in length, and so approximate to a curved line. This curved line is called the curve of pressure, or, sometimes, the line of resistance; both terms being equally correct, as it shows, on one hand, the direction in which the pressure from the upper parts of the arch is transmitted to the lower, and, on the other hand, the direction in which the resistance of the lower parts of the arch is afforded to the upper.

If we suppose, as indicated in fig. 2, that in some one voussoir, E F G H, the line of pressure

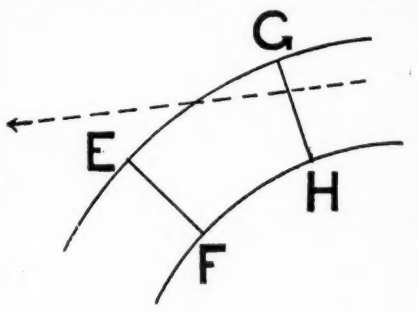


Fig 2

passed outside the upper edge of the voussoir, it is clear that we should have a force acting about the point E, and tending to turn the voussoir about that point. The arch would, therefore, open at the point F, and fail by the voussoir turning about the point E. If, on the other hand, as in fig. 3, the line of pressure

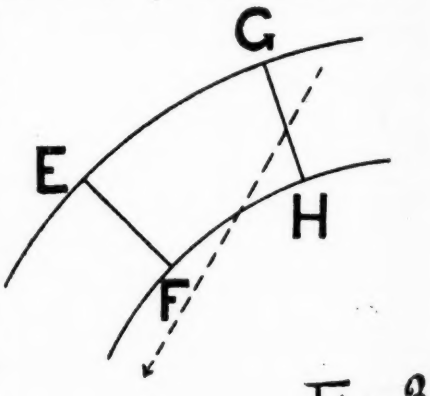


Fig 3

were to pass through the lower edge of the voussoir E F G H, we should then have a force tending to turn the voussoir about the point F, and the arch would open at the point E.

It is clear, therefore, that in order that the arch may be sufficiently strong for its work it is essential that the curve of pressure should be within the depth of the voussoir. And in order that the arch may be quite safe, the curve of pressure should be well within the depth of the voussoir. Exactly how far within the depth of the voussoir is a matter of purely arbitrary determination, though many writers have recommended that the curve should be within the middle third of the arch; that is, it

should never approach nearer to either the extrados or the intrados than one-third of the depth of the arch. Such requirement is, however, probably too severe, and does not take account of the adhesion of the mortar or cement. We should therefore be safe enough in requiring that our curve of pressure should be within the middle half of the arch, that is, should not approach nearer to the extrados or intrados than one-fourth of the depth of the arch.

OBITUARY.

M. GUSTAVE MOREAU.—The Academie des Beaux-Arts has experienced a fresh loss by the death of M. Gustave Moreau, professor at the Ecole des Beaux-Arts, at the age of seventy-two. The son of a Government architect, M. Moreau was educated in the atelier of Picot. He made his first appearance at the Salon in 1852, by a "Piéta" which attracted a good deal of attention. The following year he exhibited a very large picture, the subject taken from the Song of Solomon, which was purchased by the State and presented to the Museum of Dijon. He obtained a great success, or at least excited great curiosity, in 1864, by his picture of Œdipus and the Sphinx, a mythological work very novel in its idea and treatment. From this date he adopted symbolic and legendary subjects of this kind as his special province: "Jason," "Le Jeune Homme et le Mort" (1865); "Diomède devoré par ses Chevaux" (1866); "Orpheus" (1867); "Prometheus" and "Europa" (1869); "Hercules and the Hydra" and "Salomé" (1876); "Galatea" and "Helen" (1880). After that date he ceased to exhibit, and worked unostentatiously among his pupils at the Ecole des Beaux-Arts, by whom he was greatly beloved and respected both for his ability and his high character. He was never a popular painter, and for the last eighteen years even avoided all public notice, but he leaves the reputation of an artist of great and individual power.

MR. R. C. DRIVER.—The death of Mr. Robert Collier Driver, senior partner of the firm of Driver & Co., took place at his residence, 182, Cromwell-road, S.W., on the 13th inst., after a long and painful illness. The deceased was born in the year 1816, and after serving his articles in the office of Messrs. Marmonts, of Bristol, joined the firm of Driver & Co., then carried on by his three uncles, about the year 1848. A few years after, the deaths of the three partners of the firm threw the management of the business upon him. He was joined by his two sons and his son-in-law about thirty years subsequently. The deceased gentleman occupied a foremost position in the surveying profession. He was among the promoters of the Surveyors' Institution, of which he was a Past President, and he founded a prize of the value of 15 guineas for the highest number of marks in the examination for non-student candidates for the class of professional associate of the Institution. For forty years he held the post of treasurer and secretary to the Land Surveyors' Club; he was also a member of the Board of the Auctioneers' Benevolent Fund. He was Deputy-Lieutenant of the City of London for many years; Burgess of Westminster; Member of the Court and Past Master of the Worshipful Company of Clothworkers. He was also Vice-President of the Charing Cross Hospital. The funeral of the deceased gentleman took place at Brompton Cemetery on the 19th instant.

MR. W. H. BRAKSPEAR.—The death is announced at the Priory, Corsham, Wiltshire, of Mr. Wm. Hay Brakspear, architect. The deceased was seventy-nine years of age.

MR. W. COWELL.—Mr. William Cowell, of the firm of Messrs. Caldecott & Cowell, joiners and builders, Liverpool, died at his residence, Brompton-avenue, Egremont, on the 26th inst.

GENERAL BUILDING NEWS.

RECONSTRUCTION OF THE PARISH CHURCH, WOMBWELL, YORKSHIRE.—On the 21st inst. the Lord Bishop of Beverley consecrated and opened the nave of the new Parish Church of St. Mary's, Wombwell, which has recently been completed at a cost of about 5,000*l.* The scheme for the reconstruction includes a nave, with aisles, chancel, and western tower and spire, but the funds in hand would not permit the whole of the scheme being proceeded with, and so far only the nave of the new building has been completed. The nave is 90 ft. long, with a clear width across of 53 ft., and the height of the roof is 40 ft. The aisles are divided from the nave by arcades of Bath stone. There are large clearstory windows in the upper portion of the nave. In the chancel arch an oak altar has been placed. On the north stands a stone pulpit, which has a face of Dove marble, and a marble capping. In the three front panels the Transfiguration has been carved, after the design of Mr. C. M. Hadfield, by Messrs. Boulton & Sons, of Chapeltown, who also carved the font. The church floors are laid with wood blocks, and the aisles are paved with marble mosaic. The church is built of brick, faced in and out with Bath stone. The building is warmed on the low-pressure hot-water system, by Haden, of Manchester. The work has been carried out by the contractor, Mr. George Webster, of Sheffield, the architects being Messrs. Hadfield & Garland, of Sheffield, Mr. T. Cook, of London, acting as clerk of the works. The church, as it at present stands, has sitting accommodation for over 700 people.

THE RESTORATION OF PAISLEY ABBEY. — A meeting of the valued rent heritors was held in Paisley Abbey on the 15th inst., when they gave general approval to the proposals for the restoration, and authorised the heritors' superintending committee to consult with the restoration committee as to plans, &c., and to report when detailed plans and estimates for the commencement of operations had been completed. Dr. Rowand Anderson has been engaged as architect, and with his assistants has been conducting excavations to determine the stability of the foundations throughout the choir and the four piers which carry the central tower. These were all found to be in a satisfactory condition. It is pointed out that there will be no disturbance of graves in the restoration operations in the choir and transepts.

NEW CHURCH, LONGTON, STAFFORDSHIRE.—The foundation-stone of a new church to be erected at Sandford Hill, Longton, as an offshoot from the old church of St. John, has just been laid. The church is Early English in design, and will be built of red brick, with stone dressings. It will consist of a nave of five bays, chancel of two bays, Lady Chapel on the north side of chancel, and an organ chamber on the south side. Over the chancel arch will be a bell turret. The architect is Mr. J. Martin Brooks, of London, and the builders Messrs. Rudd & Son, of Grantham. The first cost is estimated at 3,500*l.*, with accommodation for 500. The plans provide for an enlargement at a total expenditure of 5,500*l.*

CHURCH OF EMMANUEL, SOUTHPORT.—The new Church of Emmanuel, which has been erected in Southport, has just been consecrated. The inside dimensions are 164 ft. from west to east, 66 ft. across nave and aisles, 104 ft. across transepts, and 50 ft. from floor to ceiling of nave and chancel. Five arches on each side separate the nave from the aisles, and two more the aisles from the transepts. A narthex terminating in north and south porches, with a western porch in the centre, extends across the west end of the nave and aisles. There is another entrance near the south transept, adjoining which is the baptistry. The chancel consists of the choir and the sanctuary, and above the former, carried on four arches, is the great central tower, 30 ft. square. The sanctuary is east of the tower in the east wall of which is a window of five lights, filled with stained glass by Mr. Kemp, the centre light being double the width of the others. The reredos is of oak. The centre panel contains a representation of "The Last Supper," in opus sectile by Messrs. Powell & Sons, of London. The sedilia and credence are arranged in the panelling on the south side, the former having a projecting carved canopy. The Holy Table and rails are of oak, designed and carved in keeping with the surrounding work. The floor of the chancel is of mosaic. The choir stalls and prayer desks, which are of Dantzic oak, have traceried fronts and are carved. On the north side of the chancel is an organ chamber. On the south side is a transept, forming the western portion of a future chapel, according to the original design. The only other incomplete portion of the church, except the tower, are the vestries, which are to be built behind the organ chamber. The pulpit is constructed chiefly of selected Derbyshire alabaster, but the shafts, strings, and base are of dark Ashburton marble. The font is of Caen stone. The floor of the baptistry is of mosaic, while light wrought-iron dwarf screens (with gates) divide the baptistry from the aisle and transept. The lower part of the walls of the building, inside, is faced with Accrington red bricks, and the upper with Aston Hall buff bricks, while the dressings are mostly of Accrington terra-cotta, with columns and piers of red sandstone from the Liverpool district. The roofs are all open timbered and boarded. The church outside is faced with Accrington red bricks, and the dressings are of red sandstone. The style is Early Perpendicular. The contractors for the foundations were Messrs. Wishart & Irving; for the superstructure, Messrs. Fairbridge & Hatch, both of Southport; for the chancel woodwork, Messrs. Pearson & Brown, of Manchester; for the pulpit and font, Messrs. Earp & Hobbs, of Manchester and London, who have also executed all the carving throughout the church. The electric lighting is by Messrs. Calvert & Co., and the heating by Messrs. Haden & Sons, both of Manchester. Mr. J. E. Wildman has acted as clerk of the works, and the whole has been carried out from the designs and under the superintendence of the architect, Mr. R. Bassnett Preston, of the firm of Messrs. Preston & Vaughan, of Manchester.

MISSION HALL, LINCOLN.—A new mission hall has been recently finished on the Monk's-road, Lincoln, in connexion with St. Swithin's parish. The architect was Mr. Fowler, of Durham, and the edifice has been built by Mr. M. Otter, of Lincoln. The building is of red brick.

TOWER AND SPIRE, SALTBURN PARISH CHURCH. A meeting of parishioners and subscribers was held recently to consider two alternative designs for a proposed tower and spire. On the recommendation of the sub-committee, it was resolved to adopt the design for one at the west end at an approximate cost of 2,500*l.* It was further resolved to ask the architects, Messrs. Clark & Moscrop, Darlington, to invite tenders as soon as possible.

CATHOLIC CHURCH, BURTONPORT, STRABANE IRELAND.—The foundation stone of a new church has just been laid at Burtonport. Mr. Joye, of Derry, is the architect. The contract for the work has been entrusted to Mr. M'Caffrey, of Strabane.

CATHOLIC CHURCH, TULLYALLEN, NEAR MELLIFONT, IRELAND.—The foundation stone has just been laid of a new church at Tullyallen. The church, says the *Freeman's Journal*, will be in the same style as the Abbey church, with round-headed windows, semicircular arches, and the characteristic Celtic ornamentation of spiral beads and zig-zags in its mouldings. The frontage is flanked at its northern side by a campanile tower, surmounted by an octagonal spire with cross. The tower is in two stories. A cornice is carried round the tower below the bell-loft. The tower will rise to a height of 88 ft. The height of the frontage to the roof-ridge will be 35 ft. The building will be cruciform, consisting of nave, chancel, and transepts; four windows at either side will light the nave. The transepts will be lighted by a large rose window on each gable and lesser cinquefoil windows in the sides. The length of the church will be 122 ft., the width across the nave 28 ft., and the depth of each transept 14 ft. The sanctuary will measure 27 ft. by 24 ft., and will have an apsidal ending with windows filled with stained glass. Provision is made for two sacristies. The interior of the church will be furnished in keeping with its architectural outlines. The cost of the building, apart from the interior fittings, will be 3,400*l.* The architect is Mr. W. H. Byrne. Mr. James Wynne, Dundalk, has the contract for the erection of the building. The old church is in an almost ruinous condition. The walls are cracked and the timbers of the roof are decaying. There was little foundation excavated for the walls, which are consequently giving way. The site of the new church is within the old grange of the Abbey of Mellifont.

CATHOLIC CHURCH, GLOUNTHANE, CORK.—The new church at Glounthane was dedicated on the 24th inst. The church has been built to accommodate 1,000 people. The architect was Mr. Samuel F. Hynes, Cork, and the builder Mr. J. J. Coffey, Midleton. Mr. C. O'Toole was clerk of works.

PRIMITIVE METHODIST CHURCH, LEICESTER.—The foundation-stone has just been laid of a new Primitive Methodist Church at Leicester. The building now in course of erection comprises a church, Sunday-school, and minister's house. The site faces the Hinckley and Fosse-roads and Livingstone-street. The church will accommodate 1,000 persons—600 on the ground floor, and the remainder in the gallery. The pews are circular, radiating from the rostrum. The body of the church is 47 ft. wide, with transepts 6 ft. deep at each side. The orchestra is seated for 100 persons, and is at a lower level than the main gallery. The windows are stone with tracery work, and glazed with leaded lights in tinted cathedral glass. The schools are arranged in three departments. The large assembly-room is on the ground floor, and is 41 ft. wide by 78 ft. long. The institute assembly-room is on the first floor, and is 60 ft. long by 30 ft. wide. There are also rooms for the young women and the young men respectively, and sixteen other large class-rooms. Each department has its own male and female annexe, with lavatory accommodation, the walls of which are lined with glazed bricks. The walls are faced externally with best pressed bricks, with white Hollington stone dressings. The staircases are of Yorkshire stone, with glazed brick dados. The style is Gothic. The woodwork throughout is selected pitch pine, varnished. The floors are paved with wood blocks, and the rooms will have fresh-air inlets and extraction flues. The warming will be by hot water, and the lighting by incandescent gas-lights. The architect is Mr. Harper, of Nottingham. The builders are Messrs. Langton & Son, of Enderby.

HILL CONGREGATIONAL CHAPEL, SWANSEA.—A new Congregational chapel has just been erected at Swansea by Mr. Thos. Davies, from plans prepared by Mr. Wm. W. Williams, providing seating accommodation for 500 persons. The new chapel has cost 1,400*l.*

WESLEYAN CHURCH, MARSDEN, YORKSHIRE.—Sir James Kitson, Bart., M.P., opened at Marden, on the 8th inst., the enlarged Wesleyan Methodist Church, and a new Sunday-school and a new suite of vestries. The main front of the church faces Brougham-road. The school-room is on the ground floor, the vestries at the sides, and the chapel on the first floor. In 1872 the building consisted of a chapel, with a small north gallery on the first floor, an assembly-room, and five class-rooms on the ground floor. The alterations lengthen the chapel and increase the sitting accommodation by about 130 sittings. An organ recess is provided, choir pews, minister's vestry, choir vestries, and lavatory. The additions to the school consist of a young men's class-room, 33 ft. by 21 ft.; a young women's class-room, 26 ft. by 21 ft.; four other class-rooms, an addition of 15 ft. to the length of the assembly-room, a kitchen with lift, heating chamber, and stone staircase, vestibule, and school entrance. The school accommodation is increased in space for 220 additional scholars. Local stone has been employed in building the additions, which

have been made to correspond with the main body of the church. The architects have been Messrs. John Kirk & Sons, of Huddersfield and Dewsbury, and the total outlay on the alterations and additions represents a sum of 2,000*l.*

FREE CHURCH, MACDUFF, BANFFSHIRE.—Plans prepared by Mr. A. Marshall Mackenzie, A.R.S.A., Aberdeen, for the new Free Church and hall for Macduff have been sanctioned. The building is to be erected at the corner of Duff-street and Clergy-street, and will be of limestone ashlar, with free-stone dressings. The principal entrance will be from Duff-street by a doorway in the base of the tower. Measuring 15 ft. square, the tower is about 100 ft. high to the weather vane on the top of the steeple. To a height of 65 ft. the tower is square, and above this rises a slated steeple. The upper portion of the tower affords accommodation for a clock and bell. The church will be provided with 587 sittings; and, in view of the fall in the ground on the Clergy-street side, it has been found possible to make provision for a large hall under the church, for meetings and Sunday school purposes.

WESLEYAN CHAPEL, MEERSBROOK, SHEFFIELD.—The Wesleyan Methodists of Sheffield have embarked upon a new building scheme at Meersbrook Bank, where a school chapel is being erected in connexion with the Brunswick Circuit. The chapel is situate at the corner of Derbyshire-lane, Norton Lees-lane, and Cockayne-place, and is being built to plans prepared by Messrs. Hemsoll & Paterson, of Sheffield. Accommodation will be provided for between three and four hundred persons. The outlay on the present building is estimated to be 1,600*l.*

BOARD SCHOOL, GLEADLESS, YORKSHIRE.—A new Board school, which has been erected at Gleadless, was opened recently. The school will accommodate 300 boys and girls and 180 infants, and has been erected at a total cost of 4,377*l.* 9s. 9d. The premises consist of four class-rooms on the ground-floor, and a similar number on the upper floor. There are separate entrances for the boys, girls, and infants. The architect was Mr. J. D. Webster. All the work has been done by Sheffield tradesmen. Mr. Aaron Moore was the contractor, Messrs. Badger & Sons executed the joinery, Mr. C. Hickson the plumbing, Messrs. C. Chadwick & Sons the plastering and roofing, and the heating apparatus was put in by Messrs. Wright Bros.

ADDITION TO ARDVRECK ACADEMY, CRIEFF.—An addition is to be made to this building on the south side. The building work of the new wing has been entrusted to Mr. Ellis, builder, Crieff. The architect is Mr. G. T. Ewing, Concraig.

ORANGE HALL, WEST BELFAST. — This new building, which is situated on the Shankill-road, has a frontage of 46 ft. 8 in., and extends from front to back along Brookmount-street 105 ft. From the front entrance vestibule a corridor, 6 ft. wide, runs down the centre. The front entrance vestibule contains the staircase to the large hall, and behind, on the left, the lodge and ante-rooms, while on the right are the reading, arch, ante, and box rooms, as well as back staircase, lavatories, hall, kitchen, yard, and at the further end a house for the caretaker. A wide stair at the front and another at the rear give access to the large hall, which is 62 ft. long, including gallery, and 36 ft. wide. In the front there is a gallery about 12 ft. wide, having stewards' room under, movable platform at end of hall, and ladies' and gentlemen's retiring-rooms at the rear. The architect was Mr. William Batt, of Belfast, and the works were carried out by Messrs. Campbell & Lowry, contractors.

NEW LIBRARY, HOXTON.—A Public Library in Pitfield-street, Hoxton, was opened on the 20th inst. The institution will form part of a group of public buildings, including the still unfinished baths and washhouses, which will shortly constitute the Pitfield-street frontage of the land occupied by the Shoreditch refuse destructor and electric lighting works. It includes lending and reference libraries, with shelving for about 28,000 volumes, a large news-room, together with magazine and boys' rooms. Mr. H. T. Hare is the architect of the new building. A description appeared in our issue of April 16, page 372.

HOTEL, FRASERBURGH, ABERDEEN.—An hotel is being erected at Fraserburgh, on the site of an old college. The frontage of the building, which extends for a length of 66 ft., will be granite throughout, partly dressed and partly rustic. The height from ground to eaves is 30 ft. The quaintly-carved inscriptions that adorned the old college are being preserved, and are to be built into the back wall of the hotel property. The names of the contractors are:—Mason work, Mr. George Corbett, New Pitsligo; joiners, Messrs. Brebner & Jenkins, Fraserburgh; slater, Mr. S. Stephen, Fraserburgh; plasterer, Mr. Alexander Wiseman, Fraserburgh; plumber, Mr. W. Morrison Stewart, Fraserburgh; painter and glazier, Mr. James Stuart, Fraserburgh; Messrs. D. & J. R. M'Millan, of Aberdeen, are the architects.

STORES, HETTON DOWNS, DURHAM.—The new butchering department and stables for the Hetton Downs Amicable and Industrial Society, Limited, have just been opened. The buildings are of Sherburn brick, roofed with blue slates. The front has a total length of about 90 ft., facing into Regent-street, while the back elevation is in Princess-street. The entrances are in Regent-street. The stables are approached through the large gates in Regent-street, and are designed to house twelve horses, with harness-room, sick-box, and loose-boxes. The contractor is Mr. Robert Wade, of High Moorsley, and the clerk of works Mr. George Oates, of Leamside. The architects are Messrs. Barnes & Coates, of Sunderland and West Hartlepool.

PROPOSED ADDITION TO THE CITY HOSPITAL, ABERDEEN.—The City Hospital Committee of the Aberdeen Town Council met recently. The committee took into consideration the necessity for extending the present administrative block and providing more accommodation for the nurses and servants. Mr. Rust, City Architect, submitted plans showing additions to the present block, and providing twenty-one additional bedrooms, a nurses' sitting-room, a servants' dining-hall, an enlarged sewing-room, bathroom, and lavatory accommodation. The plans also showed discharge rooms on the ground floor. The committee, while recognising the necessity for increased accommodation for the staff, deferred further consideration of the plan till the next meeting. The cost is estimated at 4,000*l.*

PUBLIC BATHS, HAMPSTEAD.—An official inspection by the Chairman and members of the Baths and Washhouse Committee of the Hampstead Vestry has just been made to the new administrative block of the public baths in Finchley-road. The old front portion of the baths, which included administrative block, seven slipper baths, and the superintendent's apartments, was pulled down in consequence of the carrying out of the Manchester, Sheffield, and Lincolnshire Railway works. The company paid the Vestry 8,300*l.* as compensation, and gave them a larger area of ground for rebuilding upon, the new area being 5,056 square feet in place of 2,000 square feet. The new front is built in the English Renaissance style of an early type, from the designs of Messrs. Spalding & Cross, of Cheapside, at a cost of 8,995*l.* The builder was Mr. T. Kingerlee, of Oxford. The new buildings include an entrance-hall, with central ticket-office leading to two entrances for men and women respectively, twenty-four slipper baths (in place of seven old ones), with enamelled slate divisions, superintendent's and clerks' offices, board-room and waiting-room, and superintendent's apartments. The baths now include four swimming-baths and a number of slipper-baths. The old portion of the baths has been repaired and redecorated throughout.

THE NEW POST-OFFICE, NEW OXFORD-STREET.—New premises for the Chief West Central District Post-office were opened on Sunday, the 17th instant. They stand at the junction with, and in, Hyde-street, and were erected from the designs of Mr. Tanner, of H.M.'s Office of Works, at a cost of 36,000*l.*, upon a site purchased from the Duke of Bedford for, it is stated, 30,000*l.* The entire front is 208 ft. long, and 116 ft. deep. The western portion of the block (built of brick) contains two large rooms, 168 ft. by 58 ft., for sorting purposes, with recreation-rooms, kitchens, &c., for the staff, and class-rooms for the messengers' institute. We gather that the old office, at the corner of Southampton-street, will be shortly pulled down, and that the site is to be taken for a block of residential flats, with quarters for Parr's Bank on the ground and basement floors.

CONSUMPTIVE HOSPITAL, PERTH.—New buildings are to be erected in connexion with the Hillside Home, Perth. They comprise a men's hospital, a women's hospital, and an administrative block—all to be devoted exclusively to the treatment of consumptive patients. There are three blocks, the centre one being the administrative block, which contains kitchen, sculleries, store-room, larder, pantry, &c. There is also a parlour or office, and a large central hall, containing a stair leading up to the bedrooms for the nurses and servants. The two other blocks are the same in design, one being for women and the other for men. There are four rooms with two beds, and two with one bed each. In front of the rooms are verandahs on both floors. Between each block and the centre one there is a large corridor, used also as a conservatory and sitting-room for the patients. Behind these, and shut off by a close screen, are the two dining-rooms. The architect is Mr. Murray Robertson, Dundee.

REFORMATORY, KINGSWOOD, BRISTOL.—The last portion of the new buildings of this institution is now on the point of completion. The new building comprises a new schoolroom, carpenters' and blacksmiths' shops, band-room, and quarters for officers' dwellings. The architect for the building is Mr. H. C. M. Hirst, and the builder for the last portion of the work is Mr. J. A. Harris, of Bristol.

NEW LIBRARY, CEFN, GLAMORGAN.—The foundation stone has just been laid of this building. The plans of Mr. R. C. Jenkins, architect, Cefn, comprising billiard-rooms, reading-rooms, library, caretaker's offices, &c., were accepted, and the erection of the block in the High-street has been entrusted to Mr. James Lloyd, Cefn.

ADDITIONS TO LAUNDRY. — WORCESTER AND MALVERN LAUNDRY COMPANY.—The company who have taken over this business are about to make considerable extensions to the laundry. In addition to remodelling the existing buildings a new carpet-beating warehouse, engine and boiler houses, stabling, &c., are about to be erected. The plans, which have been approved by the Corporation, have been prepared by Mr. Geo. Dale Oliver, architect, Carlisle.

SANITARY AND ENGINEERING NEWS.

RESERVOIR, STAINES.—A large reservoir is about to be constructed at Staines. The enterprise is a joint one, and it is being made for the West Middlesex, Grand Junction, and the New River companies. The reservoir will cost 1,000,000*l.* to build, and when finished will have a capacity of 3,300,000,000 gallons of water daily. Messrs. J. Aird are the contractors.

VAUXHALL TEMPORARY BRIDGE.—The middle span of the temporary bridge at Vauxhall was floated into position at high tide on Saturday last.

PROPOSED NEW PIER, BLACKPOOL.—Some discussion took place at a meeting of the Blackpool Tradesmen's Association recently in reference to the proposal by a syndicate to seek Parliamentary powers for the erection of a fourth pier at Blackpool opposite the Palatine Hotel. Mr. T. S. Lund, the architect, attended, and explained that the pier would relieve the congested part of the promenade at that point by widening it for a distance of 82 ft. by 115 ft. in width. This meant an additional promenading space of 9,000 ft. A resolution against the pier was carried by a large majority.

ELECTRIC LIGHTING NEWS.

ELECTRIC LIGHTING, MANCHESTER.—At a meeting of the Manchester City Council on the 20th inst., Alderman Higginbottom introduced the recommendation of the Electricity Committee to make application to the Local Government Board for their sanction to the borrowing of the further sum of 150,000*l.* for the purposes of the electricity undertaking of the Corporation. In moving the adoption of a resolution approving the Committee's recommendation, Mr. Higginbottom said the money was required for electricity purposes in the city, Moss Side, Levenshulme, and Withington, under orders which had been sanctioned by Parliament. In Manchester it was needed to provide (1) six new feeders to supply the old network. These would be necessary to convey the current from the new generators to the distributing mains. (2.) Distributing mains in Chester-road and City-road. These mains it had already been determined by the Committee to lay forthwith. In addition to these, it would be desirable to connect up with Moss Side along Denmark-road and Moss-lane, and also along Preston-street. Borrowing powers would also be required for the erection of cable stores and a testing-room on the land at the Polygon, and for purchasing sites for transformer sub-stations in various parts of the city. The high-pressure feeders would be necessary for supplying some of these sub-stations, and also the sub-stations in Moss Side and Levenshulme. Provision was also made for carrying out the street lighting, which it had been decided to provide for winter. There had likewise been included a sum for new services and meters in the city area. In regard to Moss Side, the money was required for the distributing mains in the compulsory streets and for the high-pressure mains. At Levenshulme the money was required for a site for a transformer sub-station, for distributing mains in the compulsory streets, and for high-pressure feeders. At Withington the money was required for sites for transformer sub-stations, for distributing mains in the compulsory streets, and for high-pressure feeders. The following was a summary of the estimated cost:—Manchester, 73,300*l.*; Moss Side, 15,600*l.*; Levenshulme, 8,970*l.*; Withington, 48,920*l.*; total, 146,790*l.* This would leave a sum of 3,210*l.* for "sundries and contingencies." Mr. J. Phythian (Deputy-Chairman of the Electricity Committee) seconded the motion. Sir John Harwood suggested that the sum asked for should be 200,000*l.*, and moved an amendment accordingly. This was seconded by Mr. W. Pollitt, and the Council agreed to it.

ELECTRIC LIGHTING, SWANSEA.—The electric lighting question was discussed at a special meeting of the Swansea Corporation recently. A report of the sub-committee was received, showing that they had failed to arrange with the British Traction Company to supply the latter with electricity for the trams at 1½d. per unit up to 400,000 units, and 1¼d. per unit for any subsequent amount per annum. The sub-committee advised the immediate proceeding with the Corporation's own scheme, in combination with a dust destructor, as it was most necessary to have the station in their own hands. Mr. Manville, the electrical engineer engaged, attended, and, after a long discussion, it was decided to proceed with the scheme, and to borrow 60,000*l.* for the purpose.

ELECTRIC LIGHTING FOR BARKING.—A Local Government Board inquiry has just been held at the Public Offices, Barking, by Mr. W. O. E. King, M.Inst.C.E., with regard to an application made by the Urban District Council of Barking for a loan of 15,000*l.* for purposes of electric lighting, and at the same time a further loan of 8,250*l.* was asked for to erect public baths. From the opening statement on behalf of the Council, it was shown that the town, although situate only eight miles from London, had been for years lighted by oil lamps, the Council

refusing to pay the charge of 4s. 6d. per thousand feet for gas. The cost of the oil lamp was 3*l.* 1s. per lamp per annum, whereas the cost of electricity worked out at 2*l.* 13s. 10d. per annum. The inquiry was adjourned.

ELECTRIC LIGHTING EXTENSION, ABERDEEN.—The Gas and Electric Lighting Committee of Aberdeen Town Council met on the 19th inst., and had under consideration the suggestion by Professor Kennedy, London, with reference to the extension of the electric lighting to the west end of the city. It was decided to carry out his proposal, by which the extension could be effected at a cost of 5,700*l.*

STAINED GLASS AND DECORATION.

WINDOW, ELM PARISH CHURCH, CAMBRIDGE.—A stained glass window has lately been placed in this church. It is the easternmost on the north side of the chancel, and is composed of two lights and tracery. It was designed and made at the studios of Mr. T. F. Curtis (Ward & Hughes), London.

MEMORIAL WINDOW, RISHTON CHURCH, BLACKBURN.—The subject of the memorial window placed in the south aisle of Rishton parish church is taken from a painting representing Easter morn at the Resurrection. At the top is a crown of glory, and the window is divided into two sections, one representing the angel sitting on the tomb near the sepulchre, and the other the two women of Samaria bringing spices to anoint the body. The predominating colours used in the figures of the two women are red and purple, and in the case of the angel they are white and yellow. The window has been erected by Messrs. F. Holt & Co., Warwick.

WINDOW, &C., PARISH CHURCH, BLEDLOW, BUCKS.—At Bledlow parish church recently, the dedication took place of the memorial to the late Miss Mary Grenside, which consists of an east window, altar, chancel screen, and litany desk. The screen, the litany desk, and the altar are the work of Messrs. Harry Hems & Sons, of Exeter. The east window is from the studio of Messrs. Ernest Suffling & Co., of London.

THE DECORATION OF GLASGOW MUNICIPAL BUILDINGS.—The Municipal Buildings Committee of Glasgow Corporation, at a meeting recently, had under consideration the decoration of the banqueting hall. It was decided that the three centre panels should be painted by Mr. James Lavery, R.S.A., Mr. Alexander Roche, A.R.S.A., and Mr. E. A. Walton, A.R.S.A.; and the lunette above the platform by Mr. George Henry, A.R.S.A. The pictures will be illustrative of incidents in the history of the city. Each artist will receive a fee of 500 guineas.

FOREIGN.

BULAWAYO.—A contract has been entered into between the British South Africa Company and the Mashonaland Agency, wherein the latter company will build a High Court, telegraph office with operators' rooms, telephone office, and rooms for offices and stores for same. The High Court buildings will include, besides the Court itself, a judges' room, secretary and registrar's offices, office for Public Prosecutor, robing-room for the barristers, witnesses' waiting-room, and prisoners' room. The architect who has the new buildings in hand is Mr. W. Douslin.

INDIA.—The new Government House at Naini-Tal for H.H. the Lieutenant-Governor is being erected from the designs of Mr. F. W. Stevens, C.I.E. Mr. H. S. Wildeblood, of the Public Works Department, is the Executive Engineer in charge, and Mr. Stevens the consulting architect.

FRANCE.—The Institute has just awarded to M. Adrien Chancel the prize founded by M. Duc for the encouragement of higher architectural studies. —— The new palace in the Jardin des Plantes, which is to be devoted to comparative anatomy, paleontology, and anthropology, will very soon be finished, and will be inaugurated before the end of May. —— Before separating, the Chamber of Deputies has voted the construction of a new Salle des Séances. The present one will be converted into a Salle des Conférences, and the new salle will be on the site of the Cour d'honneur which abuts on to the Place de Bourgoyne. The expense is estimated at three million francs.——The jury on the Chenavard competition in the architectural section has awarded the first prize to M. Henri Siriot, pupil of M. Moyaux, for his design for a "bibliothèque nationale;" the second prize has been given to M. Chifflot, pupil of MM. Daumet and Esquié for "une salle de concert dans un parc public;" and the third prize equally to M. Bentz, pupil of MM. Gadet and Paulin, and M. Barthélemy, pupil of M. Bernier, for "un palais destiné à recevoir les souverains étrangers."——Last Sunday at St. Maurice the monument erected by the Conseil Général de la Seine to the memory of Eugène Delacroix was inaugurated. The monument is the work of M. Lequeux, architect, and MM. Dalou and Hercule, sculptors.——The town of Epernay has just built a municipal theatre, the expense of which is estimated at 600,000 francs.——A line is shortly to be commenced from Villefranche to Tarare, and from Villefranche to Monsols by Beaujen, the expense of which is estimated at three millions of francs.——A statue of Lamartine, the poet, will shortly be erected at Aix-les-Bains. The statue, which is the work of Weitman, will be accompanied by two other figures, symbolising the lake of Bourget and the town of Aix-les-Bains, holding in their hands a garland of flowers.—— Important works are shortly going to be begun to enlarge the port of Paimpol (Côtes du Nord), and to improve the ports of Redon (Ille et Vilaine) and Calais. The expense of these different works is estimated at 3,935,000 francs.——Large prisons are to be built at Lille and Douai.——The death of M. Paul Robert, photographer, is announced. He was specially connected with the Ministère de l'Instruction Publique et des Beaux-Arts. Several important artistic works are due to him.——The death of a young sculptor, M. Clau, of Toulouse, is announced. He gave great promise.——M. le Comte Henri Delabord and M. Georges Berger have been elected members of the Conseil Supérieur des Musées Nationaux.——The "Société des Artistes Independants" have opened their annual exhibition at the Palais de Glace, Champs Elysées. It contains as usual a few good works among a crowd of absurdities and vulgarities.

MISCELLANEOUS.

PROFESSIONAL AND BUSINESS ANNOUNCEMENTS.—Messrs. Rottmann & Co., of 26, Garlick Hill, have taken additional premises at No. 25, in the same street, as an exhibition room for their decorative work.——Mr. G. P. Allen, architect, has removed from 26, Great Ormonde-street, to Adelphi-chambers, 6, John-street, Adelphi, W.C.

BRIGHTON MASTER BUILDERS.—On the 19th inst the annual dinner of the Brighton Association of Master Builders was held at the Clarence Rooms, Hotel Metropole. The Chairman (Alderman Botting, J.P.) presided. About sixty sat down to dinner. After the loyal toast had been honoured, Mr. G. S. Godfree proposed "The Mayor and Corporation." The Mayor (Alderman Sir John Blaker), in responding, said he recognised that the prosperity of the town had been largely built up by the traders, especially by the building trade, which was one of the most important industries they had amongst them. With regard to the water supply, they never tired of extolling its perfection, but it cost a very large sum of money, and he wished to urge on the inhabitants the necessity of being their own water inspectors. Recently the Corporation had been at enormous pains to arrive at a reliable estimate of the waste of water between midnight and five o'clock in the morning, and they had been absolutely staggered by the figures. Indeed, he might go so far as to say that unless something was done to check the fearful waste that went on—and he looked to every one, especially to builders and others engaged in a large way of business, to assist in that direction—the cost to the inhabitants must be increased to an appreciable degree. Touching on the price of electric light, the Mayor defended the Corporation in refusing to reduce it, remarking that even if the future disclosed that they were wrong, they voted on the side of prudence. The policy of providing the light as cheaply as possible consistent with financial safety was the right one, but no responsible body would take such a leap in the dark as the Corporation were recently asked to do.—Alderman Davey submitted the toast of the evening, "The Association of Master Builders." He said that under the existing condition of things it seemed to be necessary that combinations should exist among all trades and professions. Their own motto was "Defence, not defiance." He only wished some tribunal could be formed by which all disputes between masters and men could be amicably settled without recourse to strikes, which not only brought a great deal of misery upon thousands of men and their families but great loss to the nation. The building trade was the largest in Brighton, and had done more than any other to make the town what it was now. As a health resort, Brighton depended a great deal upon what the builders could do to make it an attractive town. Nothing had occurred in the trade during the past few years but what the Trade Committee had been able to settle, and he hoped that would long continue, to the advantage of both employer and employed.—In acknowledging the toast, the Chairman said that their Association had had a very successful year, having kept up its membership, and increased the subscription list. In every case they tried to avoid anything that was likely to create friction. If they discovered anything that was not pleasant to the men it was their duty and pleasure to put it right, so that they might maintain such a good feeling as that which existed between them and the masters at the present time. Having commented upon the great engineers' strike as a severe lesson to those who encouraged strikes, he alluded to the Employers' Liability Act as one of the most unfortunate things that had ever happened to all the trades in the country. Taking the building trade alone—it affected some other trades much worse—it meant that for every 100*l.* they paid in wages on a Saturday they would have to put down 37s. 6d., nearly 2 per cent., to insure against any loss that might happen to their men. If their liability ended there they would not complain so much, but outsiders would also have a remedy against them under this measure. It was a most one-sided Act. The question arose: What was the best thing to do, and the committee concluded that it would be to make terms with the best society they could find, and all their members to insure in the same society against any misfortune that might befall them.—Other toasts followed.

THE SANITARY INSTITUTE CONGRESS, BIRMINGHAM.—A meeting of the local general committee appointed to make arrangements for the annual congress of the Sanitary Institute to be held in Birmingham in September next, took place on the 19th inst., at the Council House. The Lord Mayor (Councillor Beale) presided, and, in proposing the appointment of a large executive committee, with his lordship as chairman, and Alderman Cook as vice-chairman, said that every member of the committee was interested in the important topics that would he discussed by the Congress, and he was convinced everyone would do his utmost to make the gathering a success. The executive committee was appointed; and the following sub-committees were also formed:—Finance (chairman, Councillor Johnstone), reception and hospitality (chairman, Councillor Godlee), excursions (chairman, Councillor Lancaster), literary and press, (chairman, Alderman Cook), exhibition (Councillor Bisseker). The following gentlemen were appointed the local hon. secretaries of conferences and sections:—Conferences: Municipal representatives, Councillor J. H. Lloyd and Mr. E. V. Hiley; medical officers of health, Dr. Barwise and Mr. F. M. Bloomer; municipal and county engineers, Mr. H. Ashton Hill and Mr. A. D. Greatorex; sanitary inspectors, Mr. J. Parker and Mr. N. Deeks; domestic hygiene, Mrs. C. J. Bracey, Miss M. Jenkyn Brown, and Mrs. Sargant. Sections: Sanitary and preventive medicine, Dr. H. Manley and Dr. T. S. Short; engineering and architecture, Mr. H. T. Buckland and Mr. S. R. Lowcock; chemistry, meteorology, and geology, Professor Frankland and Professor Kauffmann. Mr. W. S. Pritchett was appointed the local secretary. A meeting of the executive committee was subsequently held, under the presidency of the Lord Mayor, who reported that Sir Joseph Fayrer, Bart., had accepted the office of President of the Congress. The officers were requested to nominate a list of vice-presidents, and the sub-committees, in conference with the officers, were authorised to make the preliminary arrangements for the Congress and report to the committee.

MEMORIAL MONUMENT TO AN ARCHITECT.—There has just been erected in Wellshill Cemetery, Perth, over the grave of Mr. Charles S. Robertson, architect, who died in April last year, a monument in the form of a Celtic cross, about 8ft. high, of polished red freestone from Corsehill. The monument was designed by Mr. J. M. Robertson, architect, Perth, who for many years was assistant to the late Mr. Robertson. The work was entrusted to Mr. J. L. Thomson, sculptor, Perth.

PROPOSED NEW METROPOLITAN RAILWAY STATION.—The Directors of the Metropolitan Railway Company are considering a proposal to erect a new station between King's-cross and Farringdon-street stations, and plans are now being prepared by the Company's architects and engineers. The site chosen, it is stated, is at a spot where Rosebery-avenue crosses the double lines over which the trains of the Metropolitan, the District, Great Northern, Midland, and Great Western run to and from the City. The lines are not far beneath the surface, and the work presents few engineering difficulties, beyond the fact that the Fleet ditch runs beneath the permanent way.

MEMORIAL TO LORD RANDOLPH CHURCHILL.—On the 18th inst. a large number of members of the House of Commons assembled in the corridor of the members' staircase to witness the unveiling by the Chancellor of the Exchequer of a bust of the late Lord Randolph Churchill. The sculptor was Mr. Waldo Story.

THE MANSION HOUSE.—In view of the adjacent works now in progress in connexion with the construction of the Central London Railway and the subways in front of the Mansion House, an examination was made recently as to the effect, if any, of these operations on the stability of the Mansion House itself, with the result that no cause of danger or alarm exists.

ARCHÆOLOGICAL DISCOVERY AT GRANTHAM.—While making some excavations in Mr. J. D. Hawes's garden in Grantham Grange some workmen struck stone, and digging deeper unearthed the base of a solid quartrefoil pillar, with a perfect decorated mould. The pillar, measuring 2 ft. 4 in. across, stands on a block of stone 6 in. deep, which may either be a stylobate or a portion of a floor. The stone is a local formation, such as is now found at Ponton and Heydour. It is believed that in pre-Reformation times a monastery stood in the Grange, but its position could never be exactly determined. The discovery proves almost beyond doubt that such a building did exist, and further excavations are to be made, which may throw more light on the subject.—*Leeds Mercury.*

THE HOTEL CECIL.—The block of houses in front of the Hotel Cecil, in the Strand, is being cleared away preparatory to building the main front of the hotel. The façade will be set back so as to make the Strand at this point 70 ft. in width. The side streets now used as entrance-ways will be built over, and an archway entrance will be constructed in the centre, admitting to the quadrangle

A series of shops will occupy the ground floor of the frontage, the rest of the building being devoted to the hotel. The architects are Messrs. Perry and Reed.

PUBLIC IMPROVEMENTS IN CENTRAL LEEDS.—Several of the public and private projects now in hand for the improvement and development of the centre of Leeds have, says the *Yorkshire Post*, just reached an interesting stage. First of all, there is the scheme for the widening of Land's-lane. One large property was lately acquired by the Corporation, and notices have now been served upon the owners of all the scheduled premises on the east side of that thoroughfare, from nearly the top of Upperhead-row to Commercial-street. Between the west side of Land's-lane and Upperhead-row private enterprise is also exceedingly busy. An arcade is being erected, the architects being Messrs. Ambler & Bowman. The whole of the contracts have been let. The arcade, which will be named the "Victoria," will be 224 ft. long and 18 ft. wide. The widening of Land's-lane has revived to some extent a suggestion to make a good thoroughfare from Albion-place to Briggate, and thence direct on to the new street through the Shambles, already sanctioned by the Local Government Board. This proposal, should it eventually be carried out, would not only relieve the congested traffic in Commercial-street, but would also provide an alternative route to Vicar-lane and Kirkgate Market. Another matter which at the present time is engaging the attention of some of the municipal representatives, is the proposal to open out Central-road, lying between Duncan-street and Kirkgate. Not long since the owners of the Bull and Mouth Estate approached the Markets Committee, with the idea of forming a new street from Central-road, which is the property of the Corporation. The negotiations are still pending. Among other projected enterprises in Central Leeds are alterations in Lady-lane. In East Leeds the Corporation are making a short thoroughfare between Brass-street and Copper-street to communicate with Wrigglesworth-street.

APPOINTMENT OF DIOCESAN SURVEYOR.—Mr. S. Slingsby Stallwood, F.S.A., of Reading, architect, has been appointed the Surveyor of Ecclesiastical Dilapidations for the Diocese of Oxford.

BRICKWORKS, TUNBRIDGE WELLS.—New brickworks have just been opened on the Forest Estate, Spread Eagle-road, Tunbridge Wells, by the Marquis of Abergavenny, on whose land they are situated.

METROPOLITAN ASYLUMS BOARD.—The members of the Metropolitan Asylums Board met at the County Hall, Spring-gardens, on Saturday last, under the presidency of Sir Edwin Galsworthy. A letter was read from the Local Government Board authorising the Managers to erect offices on the Victoria Embankment and to expend 40,000*l.* for that purpose.—Mr. J. Lobb moved, "That having regard to the fact that the total amount paid by the managers to architects and quantity surveyors during the last four years ended at Lady Day, 1897, was 63,683*l.* 9s. 7d., the question of the appointment of an architect to the Board be referred to the General Purposes Committee for consideration and report." After some discussion, the Managers voted upon the motion, the result being that the voting was equal—namely, 15 for and 15 against. The Chairman then gave his casting vote against the motion. It was accordingly lost. The Managers, after the transaction of some routine business, adjourned.

WARD'S STONE-LEADED STAIR-TREADS.—A prospectus and diagram of this form of stair-tread has been sent to us. The system consists apparently in drilling small circular holes, about ⅜ in. diameter by ⅝ in. deep, and filling them with lead to the surface level of the step. We have not seen a specimen. We should expect such a step to give a good foothold until the lead began to wear below the surface of the stone, which it would certainly do unless the stone were a very soft one. As long as it lasts, however, it is no doubt a good and solid method of preserving a non-slipping surface. The patentees are Messrs. B. Ward & Co., of Westminster and Cardiff.

LABOUR MARKET IN THE COLONIES.—The April circular of the Emigrants' Information Office (31, Broadway, Westminster) states that in South Australia there is no demand for more hands, either in town or country districts. In Queensland the demand for labour is small, but the numerous railway and other works, which are now in progress, are helping to provide labourers with work. In Western Australia an Act has recently been passed prohibiting the landing of the following persons (amongst others):—"Any one who cannot himself write out, in the characters of any language of Europe, a passage in English of fifty words taken by the appointed officer from a British author, and append his name thereto in his own language"; or, "any one who is a pauper or likely to become a public charge." There continues to be a good demand for mechanics, miners, and other labourers. In Tasmania there is no demand for more mechanics or farm-labourers. Miners at Zeehan on the west coast, and in the surrounding districts, have been well employed; good miners can always get work, but there is no demand for inexperienced men. In New Zealand there has been plenty of work in nearly all parts for mechanics and country labourers; the local supply of mechanics seems to be sufficient, but experienced farm-labourers and miners will have little difficulty in finding places.

LISKEARD CHURCH TOWER.—A special vestry was held at Liskeard on the 21st inst., to receive and consider the plans of the proposed new tower of the Parish Church, as amended to meet the views of the chancellor of the diocese (Rev. R. M. Paul), and to determine whether a fresh petition to the chancellor for a faculty should be sent.—Mr. J. Sansom, architect, produced the plans, which, he said, were practically the same as the original design. The tower had been somewhat shortened, and instead of pinnacles there were battlements with corner turrets. He had reason to believe the plans would be accepted by the chancellor.—Mr. C. M. Olver moved that the original design be adhered to, but there was no seconder.—After some discussion, it was resolved, "That the report of the Committee for rebuilding the tower with the provision of a choir vestry, be adopted, and the vicar and churchwardens be authorised to apply to the diocesan authorities for the necessary faculty for taking down the remaining portions of the present tower and for the erection of a new tower according to the plans now before the vestry."—The new tower will be 80 ft. high, and will cost not less than £3,000.

SALE OF BOOKS.—The late Mr. E. Walford's topographical library and collection, with MSS. and autograph letters, was sold at Sotheby's on Tuesday, April 26. A set of the *Gentleman's Magazine*, 1731—1868, with some indexes, was bought for 19*l.*, and a set of *Notes and Queries*, November, 1849—December, 1897, being the eight series complete, with indexes, for 20*l.* Another lot comprised nine large folio interleaved volumes of Thornbury and Walford's "Old and New London," and Walford's "Greater London" and "Environs of London," containing an immense amount of inserted old and new views, maps, newspaper-cuttings, portraits, &c., in which the *Builder*, for both illustrations and text, is fully represented; this collection was purchased for 21*l.* 10s.

DISASTROUS FIRE IN GLASGOW.—An extensive and disastrous fire occurred in Glasgow on Monday evening about ten o'clock, and continued to burn until late Tuesday morning, resulting in the destruction of a large amount of property. The area involved is the square included within East Howard-street on the north, Ropework-lane on the east, Dunlop-street on the west, and Clyde-street, facing the river, on the south, and extends about 100 ft. broad by 200 ft. deep, though narrowing a little towards the south end. The flames caught the west side of Dunlop-street, and it also was completely destroyed. The building in which the fire broke out was situated at the north-east corner of Howard-street and Dunlop-street. The damage has been estimated at over 150,000*l.*

CAPITAL AND LABOUR.

THE LEEDS BUILDING TRADE.—At a meeting of the Leeds Master Builders' Association, which was held on the 19th inst. in the Board-room of the Royal Exchange, Mr. W. Nicholson (President) in the chair, the Committee presented their report with reference to masons' notices, and a resolution was passed approving their action and the settlement. The agreement entered into with the masons' operatives in order to prevent strikes, namely, "That in case of any dispute arising between the masters and the operatives notice to be given by either side to the Association before any strike takes place, and a joint committee of five from each side to meet and adjudicate, and their decision to be final," was approved of, and considered to be just and likely to remove friction. On these terms the masters granted the advance asked for. In regard to the joiners' notices the same offer was made to them. In reference to the dispute at Hunslet Baths, information was received that the Town Clerk had examined the books of Messrs. Dearden Bros., against whom the operatives alleged breach of Corporation agreement in not paying the standard rate of wages in the city, and that he had found the operatives' allegation untrue. The Joint Committee of the Master Builders' Association and Builders' Exchange Club met in conference on the 22nd inst. at the Royal Exchange with the delegates of the carpenters and joiners to consider the application by the latter to have their wages advanced from 8½d. to 9d. per hour. The employers had previously offered to concede the advance sought provided the men would agree to alter the wording of rule 1, which now reads:—"That 8½d. per hour be the standard wage for carpenters and joiners of fair average ability," by the substitution of the words "standard wage for skilled workmen." The men have, however, refused this offer, and at the meeting on the 22nd inst. the masters made a further proposal, to the effect that the wage ruie should remain as at present, substituting 9d. for 8½d. (and thus conceding the application of the men), with the understanding that the Birmingham rule as to strikes and disputes be adopted as an honourable agreement. The Birmingham rule runs as follows:—"No strike shall be entered upon under any circumstances without the matter in dispute having been first brought before the Standing Committee, which shall, however, meet to discuss the matter within forty-eight hours of notice being given to the secretary; and the work in dispute shall remain in abeyance until such time as the Standing Committee have settled the matter." It is suggested that the Standing Committee in Leeds shall consist of five or seven representatives from each side. The meeting was adjourned until Wednesday to give the men's delegates an opportunity of bringing the employers' proposals before their members.

NEWPORT (MON.) CARPENTERS' LOCK-OUT.—The Newport Conciliation Board met at the Town Hall, Newport, recently to endeavour to settle the dispute which has arisen between the master builders and the carpenters and joiners. The men's representatives attended, but the masters sent a letter, signed by their secretary, which was written evidently under a misapprehension as to the functions of the Board being in the direction of arbitration, and not conciliation. The lock-out has now lasted from the 7th inst.—It has since been stated that the carpenters have decided to form a new society, to be called the Newport Carpenters' Co-operative Society, which will undertake to do work, the society being conducted upon co-operative lines. About 150 carpenters and joiners are idle, and other branches of the building trades are unable to go on with their work for lack of joinery.

STRIKE OF EDINBURGH JOINERS.—A meeting of Edinburgh and Leith joiners was held in the Albert Hall, Shandwick-place, Edinburgh, recently. Mr. William Gall, President of the men's society, in the chair. The secretary intimated that he had informed the Master Builders' Association of the resolution passed by the men, resisting the alterations proposed by the masters on the present rules and regulations with regard to the curtailment of overtime rates. The reply of the masters was to the effect that the communication from the men had been received. The meeting unanimously resolved that until the present code of regulations were signed by the masters for another year, the men should not start work. Work was accordingly suspended. The strike has since been settled, however, the masters having agreed to sign as desired by the men.

EDINBURGH MASONS.—A mass meeting of the Edinburgh and Leith masons was held in the Operetta House, Chambers-street, Edinburgh, recently. The meeting had under consideration the hours' question. It was moved that the masons return to a nine-hours' working day, as was the case prior to the strike last autumn, when an eight-hours' day was conceded by the employers. On a show of hands being taken for the motion, as against a direct negative, it was evident that the voting was rather close, and the chairman announced that a ballot would require to be taken. By 432 votes to 395, or a majority of 37, it was resolved to go back to the nine-hours' day. In regard to the wages question, it was eventually announced by the chairman that the meeting had resolved to retain the present rate of 9½d. per hour, with car fares to the boundaries of the city. On inquiry among the men, the opinion was freely expressed that the step taken at the meeting was a wise one, and that the remarkable wheel about was easily explained. It was simply that when the decision to reduce the working hours was arrived at, the "young bloods" in the trade succeeded in getting a majority of votes, while now, after exactly two months' trial, the more sensible men have come forward and have asserted themselves. It was stated that they had held back on the previous occasion. A majority vote is decisive in this question, and it is expected that the party defeated may make another effort to assert their position.—*Edinburgh Evening Despatch.*

THE WAGES OF WINSFORD (CHESHIRE) BRICKLAYERS.—A joint meeting of the Operative Bricklayers' Society and a committee of the Saltmakers' Association had a conference recently anent the rate of bricklayers' wages in Winsford and district. At present the men are only paid 6½d. per hour. It was reported that all the masters except the Salt Union had offered to concede 8d. per hour. The Salt Union, who are the largest employers, insist on a sliding scale according to the state of trade. It was decided that, failing an increase before May 2, the bricklayers under the Salt Union, and who are members of the Saltmakers' Association, should declare a strike.

CARPENTERS' AND JOINERS' WAGES, LINCOLN.—Some three months ago the carpenters and joiners of Lincoln gave notice to the master builders for an advance of one penny per hour and certain alterations in the working rules. After being in communication with the masters for some time without arriving at a settlement, a meeting between the masters and the workmen's committee was held at the Lincoln Coffee Palace, when a settlement was arrived at, the masters agreeing to give, and the workmen accepting, an increase of one halfpenny per hour, making the standard rate of wages 8d. per hour. Slight concessions were made by both sides on the other rules in dispute, the amended rules to come into operation on May 1.

LABOUR QUESTIONS IN THE BUILDING AND ALLIED TRADES, MANCHESTER.—It is stated that a settlement has now been arrived at with regard to the demands made by the local operative joiners upon the master builders of the Manchester district. At a general meeting of the Manchester and district joiners, held on the 21st inst. at the Central Hall, Oldham-street, Mr. J. Stewart, chairman of the local committee, presiding, a report was given on the negotiations that had taken place between the committee and the master builders with regard to the alterations proposed by the men in the condi-

tions of working for the district, and the terms submitted by the Manchester Master Builders' Association for a settlement of the questions at issue, were brought up for consideration. The employers' proposals, which had been confirmed at a meeting of the master builders, held the previous evening, were discussed. The chief points on which concessions were offered had reference to increased rates for the first two hours' overtime, increased "lodging" money for country jobs, and better allowances for time occupied by workmen walking to outside jobs. The meeting decided to accept the offers made by the employers for a settlement of the movement.

THE CARPENTERS' STRIKE IN LEICESTER.—Mr. G. R. Askwith, barrister, London, the arbitrator appointed by the Board of Trade in the local building trade dispute, has brought the differences between masters and men to a satisfactory conclusion, with the result that the men have resumed work. The men's proposals were, briefly, a reduction of hours, and an increase of ½d. per hour, while the counter proposals of the federated employers were that the workmen should continue at 8½d. an hour, and that the hours should only be reduced during the winter months from 48 to 45½. The following award has been accepted by both parties:—Between the Leicester Master Builders' Association and the Leicester branches of the Amalgamated Society of Carpenters and Joiners. . . . . I award and declare that Rule 1 of the working rules binding the employers of carpenters and joiners and the operative carpenters and joiners in Leicester district, as published in the year 1895, shall read as follows:—"The standard rate of wages of efficient workmen shall be ninepence per hour." That Rule 2 shall read as follows:—"The hours of work shall be from the 1st day of March to October 31 (both days inclusive), for the first five days, from 6 a.m. to 5 p.m., with half an hour for breakfast and one hour for dinner; Saturdays from 6 a.m. to 12 a.m., with half an hour for breakfast. During the first two weeks of November and the last two weeks of February from 7.30 a.m. to 5 p.m., and during the remaining part of November, the first two weeks of December, the last two weeks of January, and the first two weeks of February, from 7.30 a.m. to 4.30 p.m., and during the remainder of December and the remainder of January from 7.30 a.m. to 4 p.m., with one hour for dinner; Saturdays from 7.30 a.m. to 12 a.m. A lock-up shed shall be erected on the job for the accommodation of outdoor workmen for their tools; hot water shall be provided for meals for outdoor carpenters and joiners, and for breakfast for workmen engaged in shops. The employers shall use their best endeavours to provide arrangements for meal-times, in order that workmen may have their meals either in the shop, on the job, or in a convenient place set apart for the purpose, and to provide a person to supply hot water and do the cooking for breakfast." That Rule 3 shall read as follows:—Increase payment for overtime to commence half an hour after leaving-off time from March 1 to October 31, and during the rest of the year at leaving-off time as per rule to stated time of starting at the rate of time and a quarter, and on Saturdays to commence at 1 p.m., and be at the rate of time and a half; double time for Sundays and Christmas Day. Overtime shall not be made unless absolutely necessary. This rule to affect all workmen." In Rule 4, "Twelve o'clock" shall be substituted for "one o'clock," and "one o'clock" for "1.30." Rule 5, Clause 1, shall read: "If the works are situated within the boundaries of the municipal borough the men to be at their work at the usual time for commencing." In Clause 2, "twelve o'clock" shall be substituted for "one o'clock" in both cases. Clause 3 shall remain without alteration. Clause 4, after "Saturdays," insert the words, "at which time payment for overtime commences." Clause 6 shall read as follows: "One hour's notice shall be given or required of any intention to put an end to the service, and in default thereof either party shall forfeit or pay to the other side one hour's wages, such time to be applied to the tools or in continuance of work. Any workman discharged when working away from the shop to be entitled to walk to the shop in the employer's time, unless there is convenience on the job for grinding. If by train, third class fare or walking time at three miles per hour." . . . . In Rule 8, Clause 1, after the words, "Month of November," there shall be inserted the words, "and any counter-proposals shall be submitted before the 7th of the following December." In Rule 8, after Clause 3, there shall be inserted the following as Clause 4, viz.: "That without prejudice to the rights of any employer under Rule 7 (2) notice shall be sent in cases of violation of the rules to the committee of the offending parties, and if not remedied within fourteen days of receipt of same either party shall take such action as may be deemed necessary, but if the violation is disputed the committee so notified shall, in reply, state within seven days the ground of their objection, and shall then, if required, by further notice given within three days after the delivery of their statement, bring the dispute before the council constituted as above, with a mediator, who shall meet within fourteen days to settle the dispute, and until the point or points in dispute have been discussed by the council, and (in case of their failure to settle the dispute) until after the expiration of fourteen days from the last meeting of the council at which the matter was considered, no action shall be taken by either side, and I further award and determine that if any difference shall arise as to the construction to be put upon this my award or as to the manner in which the same shall be obeyed or carried out, such differences may, at the request of either of the parties hereto or their representatives, duly authorised, be submitted to me for my determination. . . . . Signed and published in the presence of George Hardington (President of the Leicester Master Builders' Association), John Cragg (President Carpenters' and Joiners' Society).

STRIKE OF PAISLEY JOINERS.—On the 20th inst. the joiners employed at the erection of the new school in Carbrook-street, Paisley, were called out by their society. It appears that the men have been in the habit of starting at 6.30 a.m. and working till 5 p.m., with short meal hours, and the society now want them to start at 6 a.m., and have full meal hours. The masters state that they are not infringing the by-laws as to hours of working, but the society hold that they are.

THE BUILDING TRADE, WEST LOOE, CORNWALL.—At a meeting of mechanics, carpenters, masons, and other workmen held at West Looe it was decided to serve written notices on master builders asking for 6d. per hour instead of 5½d. per hour, and cessation of work at one o'clock on Saturdays instead of four o'clock.

LEGAL.

DISPUTE BETWEEN A BIRMINGHAM BUILDER AND THE CORPORATION.

THE case of Blundell *v.* Price came before a Divisional Court of Queen's Bench, consisting of Mr. Justice Wills and Mr. Justice Kennedy, on the 25th inst., for argument on appeal from the Birmingham Justices.

Mr. Lawson Walton, Q.C., in support of the appeal, said it came before the Court by way of a special case from the decision of the Justices, and raised the question whether the system of drainage which was organised by the appellant in regard to some new buildings which he was building was or was not adequately ventilated in accordance with the by-laws of the Corporation of Birmingham. The appellant said it was, and the Justices said it was not. The question really turned upon the word "sewer" in its application to the by-laws. The case stated that the appellant was charged upon an information of the Corporation that on October 18, 1897, at Charles-row, he did unlawfully break by-law No. 61, by neglecting to provide for a main drain for certain new buildings then being erected on the west side of Charles-row, a suitable trap of ventilation as provided by the bye-law in question. The contention of the appellant was that the whole of the sewage pipes belonging to his six houses formed, strictly speaking, a drain, that was, although they connected and communicated with the main drain or passage, yet all the pipes retained their character of drains, as distinct from a sewer.

Mr. Justice Wills said that the appellant wanted to make one ventilating trap do for each three houses, and the Corporation wanted a trap to each house.

Mr. Walton replied that that was exactly the point. The Corporation said that at each pipe shortly after it left each house there ought to be a separate trap, and there ought to be six instead of two, which appellant proposed to make.

The appeal was ultimately dismissed with costs.

MEETINGS.

FRIDAY, APRIL 29.

Architectural Association.—Members' Soirée (Smoking Concert), Café Monico, Piccadilly-circus. 8 p.m.

Institution of Mechanical Engineers.—Ordinary General Meeting (concluded). Mr. S. Tebbutt on "Steam Laundry Machinery." 7.30 p.m.

SATURDAY, APRIL 30.

Incorporated Association of Municipal and County Engineers.—Home Counties' District meeting at Wimbledon.

Sanitary Institute (Demonstrations for Sanitary Officers). — Inspection at the Sewage Outfall Works, Barking.

MONDAY, MAY 2.

Royal Institute of British Architects.—(1) Special General Meeting to confirm the resolutions concerning the clause to be added to By-law 9, and the alterations in By-laws 30 and 31, passed at the Special General Meeting of April 18. (2) Annual General Meeting—(*a*) To approve a recommendation of the Council to admit to alliance with the Royal Institute, the Aberdeen Society of Architects. (*b*) To receive and consider the annual report. (*c*) To elect scrutineers for the annual election of the Council and Standing Committees. (*d*) To nominate candidates as auditors for the ensuing year of office. (*e*) To appoint, under By-law 43, the Statutory Board of Examiners under the London Building Act 1894, and other Acts of Parliament, for the ensuing year of office. 8 p.m.

Surveyors' Institution.—(1) Adjourned discussion on Mr. H. M. Grellier's paper, entitled "Tithe Rent Charge Recovery;" (2, should time permit), discussion on Mr. Thomas Blashill's paper, read at the Manchester meeting, entitled "Lessons from Fire and Panic." 8 p.m.

Society of Engineers.—The adjourned discussion will be concluded on the paper entitled, "The Protection of Underground Water Supplies," read by Mr. John C. Thresh, M.D. 7.30 p.m.

Society of Arts (Cantor Lectures).—Professor Carus-Wilson on "The Electric Locomotive." I. 8 p.m.

TUESDAY, MAY 3.

Society of Arts (Applied Art Section).—Mr. Joseph Pennell on "Senefelder and the Centenary of Lithography, 1798-1898." 8 p.m.

WEDNESDAY, MAY 4.

Royal Archæological Institute.—Professor W. Boyd Dawkins on "The Excavations made in Hod Camp, near Blandford, in 1897." 4 p.m.

British Archæological Association.—Annual meeting to be held at 32, Sackville-street, Piccadilly. 4.30 p.m.

Society of Arts.—Miss Clive-Bayley on "The Revival of Hand-loom Weaving." 8 p.m.

Builders' Foremen and Clerks of Works' Institution.—Ordinary Meeting of the Members. 8 p.m.

Edinburgh Architectural Association.—Annual Business Meeting and President's Valedictory Address. 8 p.m.

Edinburgh Architectural Society.—Mr. A. N. Paterson, M.A., on "Evolution of the House: the Modern Product, including some Principles of House Planning and Design." 8 p.m.

THURSDAY, MAY 5.

Society of Antiquaries.—8.30 p.m.

Society for the Encouragement of the Fine Arts (at the Galleries of the Royal Society of British Artists, Suffolk-street, Pall Mall).—Sir Wyke Bayliss, F.S.A., on "The Likeness of Christ, from the First to the Nineteenth Century." 8 p.m.

FRIDAY, MAY 6.

Architectural Association.—(1) Mr. W. Eckstein, C.E., on "Interior Lighting (Reflected Lights, &c.)"; (2) Mr. Tom Ekin on "Electric Lighting as Applied to Architecture." 7.30 p.m.

Institution of Junior Engineers.—Westminster Palace Hotel.—Mr. H. Fraser on "Evaporative Condensers and Independent Air-Pumps for same." 8 p.m.

SATURDAY, MAY 7.

British Institute of Certified Carpenters (Carpenters' Hall).—Mr. T. M. G. Lloyd on "Some East Anglian Churches." 6 p.m.

Edinburgh Architectural Association.—Visit to (1) Craigiehall; (2) Camo.

RECENT PATENTS:

ABSTRACTS OF ACCEPTED SPECIFICATIONS.

Open to opposition until June 6.

[1897.] 7,687.—CONSTRUCTION OF WALLS, PARTITIONS, AND OTHER STRUCTURES: *J. Sheppard and F. Dashwood.*—The bricks or tiles have moulded channels on their sides and ends, with dovetailed divisions (between the channels). Mortar is laid on the bed and ends of the brick or tile, and also on the side channels, forming dowels and keys of mortar in beds and joints respectively. For setting bricks in hacks, for drying, the inventors use pallets, formed with pierced corrugated work and strips of wood, metal, or other material on their upper edges, so that the pallets carry the whole weight of the courses in the hacks, and each brick or tile is held in a separate cell, freely from vertical pressure.

8,817.—DOOR AND GATE FASTENINGS: *G. Baldry.*—For fastenings which embody a sliding bolt, operating in keepers. The bolt, which is square, is fitted to an ordinary plate, and has a number of teeth; it is worked by a ratchet lever, fixed with a pin on to one of the slides which guide the bolt.

10,064.—A SOLDERING-IRON: *T. M. Cox-Walker and G. T. Coulson.*—The object of the invention is to supply an iron that can be continuously heated whilst in use: the bellows or blower is connected to a vessel containing benzoline or other suitable hydrocarbons, a pipe passing out of the vessel receives a tube to which is attached a pipe to form a handle for carrying the iron; the latter consists of a hollow platinum cylinder or point attached to the pipe or handle, over the platinum point is a metal protecting thimble or shield and over the protector is a hollow soldering bit attached to the tube or pipe. In operation a mixture of air and benzoline or other hydrocarbon vapour is forced through the tubes and pipes into the heated platinum point, the soldering bit is then replaced or refixed, and quickly becomes hot, and may be so kept continuously by working the bellows or blower.

12,035.—WINDOW FRAMES: *R. Veevers.*—A second frame or glass stile is hinged inside an ordinary frame; thus the glass or window, being carried inside the ordinary frame, may be opened or closed as a casement window, and when closed can slide up and down; the top and bottom frames have flanges or beadings which, by overlapping, prevent draughts and the insertion of knives, &c., from without.

13,187.—SASH FASTENERS: *J. Law and J. A. Crane.*—A bolt, of crank shape, is secured by a swivel action to a plate in the lower sash; the overhanging part of the bolt has a pointed nose-bit formed at right angles which engages into notches in the frame; the knob has a swivel action, and carries a tab, below the bolt's level, fitting into a slot in the plate by side-pressure; the parts are made reversible by withdrawing the swivel screws, when two fasteners are required on the same window.

13,411.—VENETIAN BLINDS: *Mary Proctor.*—Instead of being nailed at the top, the tapes are hooked or buttoned on to the top rail of the blind; the hooks may be formed by fastening plates to the top lath, and making spring tongues in the plates.

13,558.—PLUG-TAPS: *H. Smith.*—The invention consists in making a screw joint in the tap's plug end, combined with the insertion, in the tube of a plug behind the joint, of a strainer which may be easily removed.

14,235.—DOUBLE DOORS AND CLOSING APPARATUS: *A. H. Telfer and D. Richardson.*—The doors are pivoted at the sides upon pintles of which one, on each door, projects through the frame above the door; on the extended pintles cranks are extended at about a right angle to the plane of the doors and are connected by a rod, to which springs are attached; when either door is opened in one direction the cranks and rod open the other door in the contrary direction, but when pressure is brought to bear upon both doors, and on the same side, the tendency of the pressure to open one door is nullified by the pressure upon the other door.

14,452.—VICES: *E. Kain.*—To ensure an instantaneous grip, a box, fixed upon the back jaw of the vice, has a hole for receiving a nut of the main screw carrying projections which engage with strips in the box; at the end of the main screw is a washer, or collar, having raised projections

COMPETITIONS, CONTRACTS, AND PUBLIC APPOINTMENTS.

COMPETITIONS.

Nature of Work.	By whom Advertised.	Premiums.	Designs to be delivered.
Schools (local competition)	Gloucester Sch. Bd.	Not stated	No date

CONTRACTS.

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered.
*Painting, &c. at Chelsea Barracks	War Department	R. E. Office, 41, Charing Cross, S.W.	May 2
*Paving Streets	Camberwell Vestry	Surveyor, Vestry Hall, Camberwell	do.
*Ten Cottages	Waltham Holy Cross U.D.	C. W. Wiggs, Council Offices, Waltham Abbey	May 3
*Kerbing, Channelling, &c.	Lewisham B. of W.	Surveyor, Offices, Catford, S.E.	do.
Additions to Schools	Cowling (Yorks.) Sch. Board	J. Hartley Archt. Skipton	do.
Additions, Old Trafford Police Station	Standing Joint Committee	H. Littler, Archt. County Offices, Preston	do.
Schools, Lock-lane, near Castleford	Allerton-Bywater Sch. Board	R. M. McDowall, Archt. Carlton-st. Castleford	do.
Engine House, Cottages, &c at Sewage Works, near Exeter	St. Thomas, &c. U.D.C.	S. Churchward, Surv. Council's Offices	do.
*Paving Road	Fulham Vestry	C. Botterill, Town Hall, Walham Green	May 4
Seven Cottages, Bebside	N. E. Ry. Co.	W. Bell, Archt. Central Station, Newcastle-on-Tyne	do.
Additions, &c. Second Presbyterian Church, Ballynahinch, co. Down		H. Hobart, Archt. Dromore	do.
School Building Work, Swinton	Manchester Union	A. J. Murgatroyd, Archt. 23, Strutt-street	do
Sewering, Paving, &c.	Belfast Corp.	City Surveyor, Town Hall	do.
Villa, Bridge Estate, Chertsey		G. M. Benstead, Lasswade House, Chertsey	do.
Five Houses, Somerset-rd. Huddersfield	Oddfellows' Lodge	J. Berry, Archt. 9, Queen-street, Huddersfield	do.
*Asphalte Paving	Westminster Vestry	G. R. W. Wheeler, Town Hall, Caxton-street, S.W.	do.
Building Works at Recreation Ground	Jarrow Sanitary Authority	Borough Surveyor, Grange-road	May 5
Pair Villas, Tennyson-avenue, Bridlington Quay	Mrs. W. Blackburn	J. Earnshaw, Archt. Carlton House, Bridlington Quay	do.
*Excavating and Foundations	Met. Asylums Board	E. T. Hall, 57, Moorgate-street, E.C.	do.
*Cast Iron Socket Pipes and Connexions	Isle of Wight R.D.C.	Council Offices, Newport, Isle of Wight	do.
*Fireproof Floor, &c.	Hampstead Vestry	A. P. Johnson, Vestry Hall, Haverstock Hill, N.W.	do.
*Flushing Tanks, Manholes, Brick Sewer, and Repairs to Sewer	do.	The Surv. Vestry Hall, Haverstock Hill, N.W.	do.
Lodge, Crumpsall Recreation Ground	Manchester Corp.	City Surv. Town Hall	do.
Cast Iron Pipe Conduit	Motherwell Burgh Commissioners	J. M'Cullum, Engr. Town Hall, Motherwell	do.
Alterations to Branch Stores, West Hartlepool	Hartlepool Co.-op. Soc. Ltd.	Secretary, Whitby-street, Hartlepool	do.
Sanitary and Widening Works	Carrickfergus Municipal Commissioners	J. Boyd, Town Hall	do.
Parsonage, Gobowen, Oswestry		Shayler & Madoc-Jones, Archt. 19, Church-street, Oswestry	do.
*Guernsey Granite	Bethnal Green Vestry	F. W. Barratt, Vestry Hall, Church-rd Bethnal Green	do.
*Shop at Trent, Extension of Lodgings, Stables, Worcester. Cleaning and Painting, Various	Midland Ry. Co.	Co.'s Archt. Cavendish House, Derby	May 6
Rifle Range Buildings, &c. Golspie Links, Inverness		Major Morrison, Golspie	do.
Twenty-one Cottages	Thurles (Ireland) Town Commissioners	J. S. Cooke, Commissioners' Offices	do.
Three Mortuary Chapels, &c.	Gorton U.D.C.	C. H. Marriott & Son, Archt. Dewsbury	do.
Road Making and Drainage	do.	do.	do.
Extension of Sewerage Works, Frodsham, Lordship	Runcorn R.D.C.	W. Diggle, Surv. Holly Bank, Frodsham	do.
Additions to Palmer's-cross House, Elgin		C. C. Doig, Archt. Elgin	May 7
Additions to Lowerhouses Club, Huddersfield		J. Berry, Archt. 9, Queen-street, Huddersfield	do.
Granite Setts, Kerbs, &c.	Ashby-de-la-Zouch U.D.C.	G. H. Lilley, Surv. Council's Offices	do.
Waterworks, C.I. Pipes, &c.	Ripley U.D.C.	Robt. Argile, C.E. Surv. Ripley	May 9
Lodging House	Eastbourne Corp.	W. G. Field, Archt. Town Hall	do.
Limestone	Abergavenney R.D.C.	J. Gill, Surv. Hereford-rd. Abergavenny	do.
*Painting	Wanstead S.B.	J. T. Bressey, 70 and 71, Bishopsgate-st. Within, E.C.	do.
*Painting, &c. Infirmary	St. Marylebone Gdns.	Steward at Infirmary, Rackham-street, Notting Hill, W.	do.

CONTRACTS—*Continued.*

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered.
*Public Conveniences	Cromer U.D.C.	A. F. Scott, Surveyor's Office, Cromer	May 9
*Painting, Whitewashing, &c. at Sandhurst	War Department	R. E. Office, North Aldershot	May 10
*Painting, &c. at N. Aldershot	do.	do.	do.
*Washing Machinery	Barrow-in-Furness Guardians	J. Y. McIntosh, Cornwallis-street, Barrow	do.
Masonic Lodge Room, Menai Bridge, N. Wales		R. G. Thomas, Archt. Menai Bridge	May 11
*Block of Isolation Wards	Metropolitan Asylums Board	A. & C. Harston, 15, Leadenhall-street, E.C.	do.
Additions to Hospital, Boston, Lincs.		J. Rowell, Borough Offices, Market-place, Boston	May 12
Steam Laundry, &c. at Workhouse	Warwick Union	F. P. Trepess, Archt. 8, Jury-street, Warwick	do.
County Schools, Llangefni, Anglesey, North Wales	Governors	H. Teather, Archt. Queen-street, Cardiff	do.
Boiler and Fixing	Nantwich Union	C. E. Speakman, Poor Law Offices, Nantwich	do.
Villa, Chelmsford		F. Whitmore, Archt. Chelmsford	do.
*Intermediate Schools	Llangefni County Schools	Headmaster, Nant Villa, Llangefni	do.
Alterations, Schools of Science and Art	Oswestry T.C.	Borough Surveyor, Guildhall, Oswestry	May 12
Cemetery Chapel	Lakenheath (Suffolk) P.C.	F. E. Rolph, High-street, Lakenheath	do.
*Sewers, &c.	Wilmslow U.D.C.	Offices, Swan-street, Wilmslow	do.
Six Shops, Longmoot-lane, Aintree, near Liverpool		W. P. Hartley, Aintree, Liverpool	May 16
*Wood Paving, Sand, Shingle, and Cement	Paddington Vestry	Surveyor, Vestry Hall, Harrow-road, W.	do.
*Wood Paving	do.	do.	do.
*Tar (for Wood Paving)	do.	do.	do.
*1¼ miles of Aqueduct	Birmingham Corp.	J. Mansergh, 5, Victoria-street, S.W.	do.
*Foundations	Commissioners H.M. Works	12, Whitehall-place, S.W.	do.
*Works Connected with Erection of Infirmary	Barton-upon-Irwell Union	Hurrett & Taylor, 25, Brazenose-street, Manchester	May 18
Wing, Royal Albert Asylum, Lancaster		Austin & Paley, Archt. Lancaster	May 19
Schools, Parsonage, &c. Penyfai, Bridgend	R. W. Llewellyn	Cook & Edwards, Archt. Masonic-bldgs. Bridgend	No date
National School Additions, Muckamore, near Belfast		M. Hawthorne, Dunadry, near Belfast	do.
Alterations, &c. to Presbyterian Church, First Randalstown, near Belfast	Committee	R. J. Craig, Shane's Cottage, Randalstown	do.
Additions to British School, Abergavenny		E. A. Johnson, Archt. Abergavenny	do
Church (St. Ambrose), Bournemouth West		C. Hodgson Fowler, Archt. Durham	do.
Additions to Church and Schools, Ashton-under-Lyne		J. M. Burton, Archt. 2, Guild-lane, Hooley Hill	do.
Two Houses, Kensington-street, Bradford		F. Moore, Archt. 40, Sunbridge-road, Bradford	do.
Alterations, &c. to Business Premises, Whitby-street, Hartlepool		M. Armstrong, 13, Mitchell-street, Hartlepool	do.
Rebuilding Brickmakers' Arms, Turf Moor, Burnley	Massey's Burnley Brewery Co. Ltd.	T. Bell, Archt. 14, Grimshaw-street, Burnley	do.
Buildings, Station-terrace, Cardiff	Young Men's Christian Assoc.	Jones, Richards, & Budgen Archt. 18, St. Mary-st. Cardiff	do.
Pair Cottages, East-street, Dedham, near Colchester	Mrs. Sharpe	J. W. Start, Archt. Colchester	do.
Schools, Stevington, Beds.		Usher & Anthony, Archt 9 St. Paul's-square, Bedford	do.
Additions, &c. to Methodist Chapel, Newbold, Derbyshire		W. Cecil Jackson, Archt. 29, Knifesmith-gate, Chesterfield	do.
House, Howard-place, Carlisle	Mr. Smith	H. Higginson, Archt. 3, Lonsdale-street, Carlisle	do.
One House, Five Cottages, Queen-street, Hurst, Lancs.		Jos. Heys, 196, Curzon-rd. Hurst	do.
Eight Houses, &c. Otley-road, Guiseley, Yorks.		F. Moore, Archt. 40, Sunbridge-road, Bradford	do.
Two Houses, Higham, Ferrers	District Freehold Land Soc.	H. Admitt, Archt. High-street, Rushden	do.
Additions, &c. to Cliff Side, Kendal	E. J. Abbott	J. Thompson, Archt. 1, Finkle-street, Kendal	do.
*Nave and Aisles of Church, Bournemouth		Boreham & Morton, Sunderland	do.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in.
*Second Assistant (Surveyor's Dept.)	Lewisham B. of W.	30s. rising to 50s. per week	May 3
*Clerk (Accountant's Department)	Southwark Vestry	35s rising to 45s. per week	May 9
*Surveyor and Engineer	Camberwell Vestry	500l. rising to 700l. per an.	do.
*Architectural Assistant	Loughboro' Corp.	2l. 2s. per week	No date

Those marked with an asterisk (*) are advertised in this Number. *Competitions, p.* iv *Contracts, pp.* iv. vi. viii. *&* ix. *Public Appointments, pp.* xvi. xvii. *&* xix.

and on the back of the nut are corresponding projections to engage therewith, that the collar and nut may act as a clutch; on tightening up the article placed in the vice, the projections on the nut come immediately into contact with the strips, and so afford a firm grip on the nut or vice.

20,517.—AN EASEL: *J. H. Hunter.*—The picture may be raised or lowered, and fixed at any desired angle of light, by means of (*a*) a clip sliding upon the centre rail and secured by a thumb screw, (*b*) a sliding rod with ratchet bar at right angles thereto which "cogs" with the picture, and secures it at any side angle [that is to say, on the axis of its lower side], and (*c*) an attachment or folding shelf that acts as a retainer to the front and back legs.

24,609.—ARTIFICIAL STONE: *L. Brockmann.*—Pulverised gravel (500 parts by weight) and 150 parts (by weight) of magnesite are mixed together, and then worked up with a solution of chloride of magnesium (65 parts), alum (7 parts), barytes (3 parts), water glass (3 parts), and five parts of colouring medium.

28,327.—CONNEXION BETWEEN LEAD AND EARTHENWARE FOR CLOSETS AND THE LIKE: *E. H. Edwards.*—The specification is drawn in singularly laconic terms; the lead pipe is packed, with spun yarn and red lead, in a socket formed within the thickness of the earthenware pipe.

29,420.—PLATES, SLABS, &C., FOR BUILDING PURPOSES: *W. Vleck.*—The clay plates, for covering masonry, flooring, &c., have recesses or projections in their under surfaces; as the ground clay is dry-pressed in the mould, an india-rubber plate provided with projections is placed above the mould, or is itself used as a matrix, in which latter case the clay is placed above the plate.

[1898] 822.—A SUBSTITUTE FOR WOOD OR STONE: *V. Micheli.*—The paste has for its base detritus of natural carbons—such as anthracite coal, lignite, and peat, or artificial carbons—such as coke, charcoal, and fossil resin; to these may be added terra-cotta, puzzolanas, ashes, fossil farina, or the like; the materials are pulverised, soaked in alum solution, and then formed into a paste by admixture with equal parts of water and of hydrochloric acid in which carbonate of magnesia hydrate has been caused to re-act until effervescence has ceased; the paste is further mixed with oxide of magnesia, or of iron, or of lead, or with cements, and moulded.

3,900.—PRESERVING, COLOURING, AND HARDENING WOOD: *F. Grumbacher.*—The wood is treated at low temperatures (40-60 degs. C.) *in vacuo* until the free moisture and the greater part of the hygroscopic moisture are removed (or the temperature may be increased to 200 degs. C. to intensify the wood's colour), then its inter-cellular formation is converted into preservative substance by pressure under increased temperature, and the wood is hardened by being cooled under pressure.

4,594.—CEMENT AND BUILDING BLOCKS: *F. J. Bergmann.*—Clinkers or stones are produced from solid ungranulated blast-furnace slag and lime (with or without the admixture of coke dust and slag rich in silicates) and then ground and fashioned; thus are obviated the costly processes of granulating hot slag and drying wet slag-sand, whilst a better powder containing a larger quantity of fine dust is obtained.

NEW APPLICATIONS.

For week ending April 16.

8,487, Maddison & Elder, Multiplex Radius Pump. 8,491, H. Burton, "The Gapless Door." 8,493, C. H. Clifton, Metal-Sawing Machines. 8,495, McFarlane and Others, Electric Switches and Fuses. 8,496, A. G. New, Motor Cars. 8,499, Kittson & Browne, a Pigment or Paint. 8,503, Simpsons, Sliding-sash Fasteners. 8,504, Gorse and Others, Cut Nails with Double Points. 8,507, W. Johnson, Pressing Bricks, Tiles, Peat, &c. 8,513, J. H. Winter, Land Markers. 8,520, Michaëlis & Echterhoff, Self-closing Closet Discharge. 8,527, A. Gibbs, Self-registering Hydrostatic Douche. 8,529, T. A. Edison, Rock Breaking. 8,531-3, T. A. Edison, Elevators and Conveyors, Bricking Machines, and Dryers. 8,535, T. M. Righter, and 8,720, Ross & Reed, Pipe Wrenches. 8,541, W. B. Hughes, Trolleys for Use in Brick and Tile Making. 8,548, T. Buck, Brick-making Machinery. 8,550, W. M. Scott, Magnetic Circuit Breakers. 8,551, Smith & Cruickshank, Lifts and Elevators. 8,552, Eugen Langen's Erben, Appliance for Enabling the Suspended Vehicles of Elevated Railways to Retain their Vertical Position on Inclines without Assuming an Oscillating Motion. 8,565, Paul Lacroix; 8,568, D. Bénézet; 8,675, A. Graetz; 8,683, Aykroyds; 8,694, L. M. Miller; 8,780, C. H. Uttley; 8,811, J. Wood; and 8,825, A. F. Bowers, Generation of Acetylene Gas. 8,567, A. I. Ramus, Safety Bolts for Windows, &c. 8,575, J. Solomon, and 8,604, Tonks, Locks. 8,581, A. Pieper, Manufacture of Articles from Asphalte or other Plastic Material. 8,591, R. A. Crowe, a Full-way Vertical Action Plug Cock. 8,594, O. Beck, Closure of Swing and other Doors. 8,595, T. E. Heath, Easels. 8,596, T. Feather, Improvements in Building Construction upon the Principle of the Parallelogram of Forces. 8,600, P. Campbell & Sons, and Another, a Mitre Planing or Stripping Machine. 8,603, G. Ihle, Waterproof Contact Apparatus for Electric Railways with Underground Conductor. 8,627, H. J. Murat, Roofing. 8,650, C. L. Van Buskirk, Endless Rope Railway Conveyor. 8,671, A. E.

Durrant, Door Check Springs. 8,677, C. H. Gadsby, Tramway Rails. 8,685, Lathams, Employment of Disinfectants. 8,686, Nuttall & Roberts, Friction Clutches. 8,695, J. J. Edmondson, Treatment of Sewage. 8,697, W. R. Green, Cranes, &c. 8,702, Tavernor & Leverus, and 8,812, Jones, Acetylene Gas Lamps. 8,717, McHardy & Froy, Ventilating Apparatus. 8,749, E. J. Philip, Dry Section Valve for Automatic Fire Sprinklers. 8,755, H. J. Edwards, Window Fastener. 8,764, A. Jones, Miners' Safety-lamps. 8,772, J. W. Martin, Combined Water Heater and Filter. 8,781, R. E. O. Suchier, Self-regulating Stove. 8,786-7, W. Youlten, a Stay for Casement Doors and Windows, and Centre for Centre-hung Windows. 8,792, E. Oberländer, Gas Savers, &c. 8,793, J. Caudrey, Collapsible Gates, &c. 8,795, G. Fowler, Pit-Props. 8,800, Fletcher & Cutler, Miners' and other Safety Acetylene Hand-lamps. 8,803, P. Levenq, Pipes or Tubes. 8,805, W. A. Skingley, a Disinfecting Air Shaft Top. 8,816, J. Feketeházy, Fire-proof Floors and Ceilings. 8,828, P. Haddan, Appliance for Use in Sketching, &c. 8,832, C. E. O'Keenan, Electricity Meters. 8,843, J. W. White, Aërial Rope-ways. 8,845, J. Galloway, Ball Valves for Flushing Cisterns, &c. 8,847, Ducketts, Urinals. 8,861, D. Wilson, a Chimney-pot. 8,874, J. Turner, Baths. 8,884, Spencer and Others, Junctions for Tubes, Pipes, Telegraph Posts, &c. 8,907, J. Marshall, Scarifying Apparatus. 8,921, F. H. Cheesewright, Fire Extinguishers. 8,923, H. Porter, a Door Check.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

April 14.—By DAVID J. CHATTELL.

Walworth.—63, Finchley-rd., u.t. 52½ yrs., g.r 3*l.* 10s., r.40*l.*	£570
Haverstock Hill.—19, Queen's-cres., u.t. 62 yrs., g.r. 10*l.*, e.r. 45*l.*	470
Caledonian-rd.—100, Bemerton-st., u.t. 46½ yrs., g.r. 6*l.*, r. 45*l.*	520

By DENNANT & Co.

South Kensington.—2, Drayton-ter., u.t. 45½ yrs., g.r. 2*l.*	730
Old Brompton-rd., "The Zetland Arms" public-house, a profit rental of 150*l.* for 19 yrs.	1,400
Brockley.—38 to 48 (even), Wallbutton-rd., u.t. 77 yrs., g.r. 40*l.* 10s., e.r. 252*l.*	1,550

By NEWBON, EDWARDS, & SHEPHARD.

New Cross.—Baildon-st., i.g.r. 50*l.*, u.t. 28 yrs., g.r. 8*l.*	450
Canonbury.—7, Canonbury-st., u.t. 20½ yrs., g.r. 5*l.*, r. 26*l.*	220
Islington.—63, Cloudesley-rd., u.t. 19 yrs., g.r. 4*l.* 10s., e.r. 34*l.*	230
49, Colebrook-row, f.	920
Hornsey.—15, Enfield-rd., f., r. 36*l.*	550
Highbury.—135, Riversdale-rd., u.t. 72½ yrs., g.r. 7*l.*, r. 34*l.*	295

By STIMSON & SONS.

Bexley.—18, 19, and 24 to 31, Salisbury-rd., u.t. 84 yrs., g.r. 22*l.* 16s., r. 244*l.*	2,490
Farningham, Kent.—High-rd., six freehold houses, r. 84*l.* 5s.	910
1 to 7, South-ter., f., r. 139*l.* 10s.	1,660
Camberwell.—138, Wells-st., u.t. 50½ yrs., g.r. 18*l.*	220
Walworth.—79A, Boyson-rd., u.t. 53 yrs., g.r. 5*l.*, r. 45*l.*	450
Poplar.—39 and 41, Chipka-st., u.t. 57 yrs., g.r. 6*l.*	180

By G. B. SMALLPIECE (at Woking).

Woking, Surrey.—Heathside-lane, two building sites, 2 a. 1 r. 34 p., f.	1,450

By FRANCIS PITTIS & SON (at Totland Bay).

Freshwater, Isle of Wight.—"Lorne Villa," f., r. 70*l.*	£975

By A. W. TYRRELL (at Basingstoke).

Old Basing, Hants.—"Basing House" and about 20 a., f.	3,200
An enclosure of land, 10 a. 1 r. 27 p., f.	800

April 15.—By E. HOLSWORTH.

Bethnal Green.—26 and 32, Pollard's-row, with workshop, f., r. 126*l.* 14s.	1,830
Highbury.—63, Riversdale-rd., u.t. 72½ yrs., g.r. 6*l.* 10s., e.r. 38*l.*	320

By A. J. SHEFFIELD.

Whitechapel.—55 and 57, Vallance-rd., and 72, Underwood-st., f., r. 131*l.* 6s.	1,600
Mile End.—1, 4, 7, 12, and 28, Antcliff-st., u.t. 30 yrs., g r. 17*l.* 10s., r. 156*l.*	1,200
Canning Town.—2 to 18 (even), St. Thomas-rd., u.t. 990 yrs., g.r. 37*l.* 16s., r. 196*l.* 6s.	1,100
Poplar.—65 and 67, Teviot-st., u.t. 67 yrs., g.r. 8*l.* 8, Union-st. and 3, Osborne-place, f., r. 29*l.* 18s.	585

By HOPPE & SOWDON.

Islington.—56, 58, 60, and 62, High-st., f., r. 212*l.* 10s.	215
Mile End.—31, 33, 35, and 37, Redman's-rd., u.t. 20 yrs , g.r. 76*l.*, r. 158*l.* 14s.	4,620
236 and 238, Jubilee-st., u.t. 58 yrs., g.r. 10*l.*, r. 70*l.*	205

April 16.—By BENINGFIELD, TIDY, NORRIS, & DUVAL (at Hertford).

Hertford.—Fore-st., "The Ram Inn" and Cattle Market, f., r. 65*l.*	805
Railway-st., freehold business premises, r. 44*l.*	2,000
Hoddesdon, Herts.—Amwell-st., freehold house and shop, e.r. 30*l.*	1,055
St. Albans, Herts.—10 and 12, Lattimore-rd., f., r. 19*l.* 4s.	605
Bennington, Herts.—Freehold house and shop, and 4 a. 3 r. 32 p., r. 27*l.*	380
Hebing End, &c., eight freehold cottages, r. 29*l.* 4s.	360

April 18.—By W. A. BLAKEMORE.

City of London.—1, 2, and 3, Falcon-sq., u.t. 19, 56, and 18¼ yrs., g.r. 71*l.*, e.r. 1,370*l.*	220
Brixton.—15, 17, 21, and 23, The Avenue, u.t. 76 yrs., g.r. 26*l.* 5s., r. 128*l.*	500
Battersea.—30, 32, 34, and 36, Sterndale-rd., u.t. 66 yrs., g.r. 13*l.* 10s.	1,245

By ELGOOD & FULLER.

Blackfriars.—23, Blackfriars-rd., f., r. 65*l.*	565

By E. H. HENRY.

Wandsworth.—737, Wandsworth-rd., u.t. 50½ yrs., g.r. 5*l.*, r. 50*l.*	2,320
Brixton.—22 to 25, Trelawn-rd., u.t. 81½ yrs., g.r. 30*l.*, r. 149*l.*	590

By ALFRED RICHARDS.

Wood Green.—1, 2, 3, and 4, Westberry-pl., f.	1,315

By MOSS & JAMESON.

Kilburn.—65 and 67, Cambridge-rd., f., r. 135*l.*	£2,740
Catford.—Willow Walk, f.g.r. 9*l.*, reversion in 83½ yrs.	225
Thornton Heath.—Fernham-rd., f.g.r. 10*l.*, reversion in 69 yrs.	260
Beckenham, Kent.—High-st., i.g.r. 54*l.* 10s., u.t. 61 yrs., g.r. 9*l.* 10s.	950
Forest Hill.—2, Rockbourne-rd., u.t. 30 yrs., g.r. 7*l.* 10s., r. 35*l.*	220
Battersea.—28, 30, and 32, Andoe-rd., u.t. 62 yrs., g.r. 30*l.*, r. 80*l.*	1,350

April 19.—By RUTLEY, SON, & VINE.

Kentish Town.—98 to 108 (even), Carlton-st., u.t. 61¾ yrs., g.r. 36*l.*, r. 215*l.*	2,140
Holloway.—12 and 16, Denmark-ter., u.t. 63 yrs., g.r. 8*l.*	305

By WESTON & SONS.

Hampstead-rd.—2, Exmouth-st., u.t. 12½ yrs., g.r. 5*l.* 10s., r. 40*l.*	160
Brixton.—36, Horsford-rd., f., r. 55*l.*	870
22, Tindal-st., f., r. 32*l.* 10s.	360
Kennington.—16, 18, and 20, Royal-rd., f., r. 98*l.* 16s.	1,080
26, 28, and 30, Cook's-rd., u.t. 65½ yrs., g.r. 12*l.*	935
Clapham.—39 to 55, Nelson's-row, u.t. 69 yrs., g.r. 45*l.*	1,000
Kennington.—22, 24, and 26, Mansion House-st., held subject to lives aged 79 and 79, g.r. 4*l.* 10s.	
Brixton.—45, Holland-st., u.t. 1½ yrs., g.r. 8*l.* 15s	120
Camberwell.—45 and 47, Camberwell New-rd., u.t. 3 yrs., g.r. 8*l.* 16s.	

By BEAN, BURNETT, & ELDRIDGE.

Commercial-rd. East.—Nos. 436 and 438, f., e.r. 200*l.*	2,010
Hammersmith.—70, 72, and 74, Glenthorne-rd., u.t. 76 yrs., g.r. 18*l.*	770

By CHANCELLOR & SONS.

Isleworth.—The Square, "Holland House," c., e.r. 20*l.*	800

By DEBENHAM, TEWSON, & CO.

Oxford-st.—34 and 36, Hanway-st., u.t. 43 yrs., g.r. 61*l.*, r. 213*l.*	1,400
1, Hanway-pl., u.t. 43 yrs., g.r. 5*l.*, r. 45*l.*	435

By HERRING, SON, & DAW.

Dulwich.—41, Friern-rd., u.t. 79 yrs., g.r. 6*l.*, r. 30*l.*	300

By E. & H. LUMLEY.

Stockton, Wilts.—"The Glebe Farm," area 622 a. or. 6 p., f.	7,000

By WRIFORD & DIXONS.

Holborn.—Eagle-st., f.g.r. 20*l.*, reversion in 85 yrs.	570
Eagle-st., f.g.r. 50*l.*, reversion in 87 yrs.	1,385
South Kensington.—Redcliffe-rd. (Bolton Studios), f.g.r. 120*l.*, reversion in 65 yrs.	3,500
Redcliffe-rd. (Bolton Studios), f.g.r. 40*l.*, reversion in 65 yrs.	1,200
Holborn.—28, Eagle-st., f., r. 38*l.*	700
Piccadilly.—14, Dover-st., f., r. 200*l.*	5,400
Leicester-sq.—34, Little Newport-st., f., r. 120*l.*	2,900
Oxford-St.—Berwick-st., "The Paris Hotel and Restaurant," f., r. 130*l.*	3,260
65, Berwick-st., f., r. 73*l.*	2,750
32, Berwick-st., and 15, Wardour Mews, f., r. 100*l.*	3,000
40, Berwick-st., f., r. 55*l.*	1,600
205, Wardour-st., f., r. 140*l.*	3,560
Tottenham Court-rd.—62, Huntley-st., and 65, Chenies Mews, f., r. 122*l.* 10s.	1,500
Twickenham.—Fairlawn-ter., f.g.r. 60*l.*, reversion in 90 yrs.	1,800

By JOHN GEORGE SMITH (at Newcastle).

Tynemouth, Northumberland.—The Tynemouth Aquarium and Winter Garden, area 3 a., u.t. 68 yrs., g.r. 1*l.*	10,000

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; yd. for yard, &c.

PRICES CURRENT OF MATERIALS.

TIMBER.

Greenheart, B.G.	ton	8/0/0 0/0/0
Teak, E.I.	load	9/0/0 14/0/0
Sequoia, U.S.ft.cu.		1/8 1/10
Ash, Canada, load		2/7/6 3/12/6
Birch, do.		2/10/0 4/2/6
Elm, do.		3/2/6 4/2/6
Fir, Dantsic, &c.		2/11/0 3/11/0
Oak, do.		2/3/0 3/3/0
Canada		3/15/0 5/0/0
Pine, Canada red		c/o/o o/o/o
Do. yellow		2/5/0 4/5/0
Lath, Dantsic, fath		4/10/0 5/10/0
St. Petersburg..		5/0/0 6/10/0
Wainscot, Riga, &c., log		3/15/0 5/10/0
Odessa, crown		3/15/0 5/10/0
Deals, Finland		
2nd & 1st std 100		8/0/0 8/10/0
Do. 4th & 3rd ..		8/0/0 8/10/0
Do. Riga		6/10/0 7/10/0
St. Petersburg, 1st yellow		10/0/0 12/10/0
Do. 2nd yellow.		9/0/0 10/10/0
Do. white		8/10/0 10/10/0
Swedish		9/0/0 15/0/0
White Sea		9/10/0 10/0/0
Canada, Pine 1st		19/5/0 25/5/0
Do. do. 2nd		13/15/0 16/5/0
Do. do. 3rd, &c.		6/5/0 9/15/0
Do. Spruce, 1st		10/5/0 11/15/0
Do. do. 3rd and		
and		7/15/0 8/15/0
New Brunswick		6/15/0 7/15/0
Battens all kinds		5/0/0 18/0/0
boards, sq., 1 in. prep.		
1st		9/0 16/6
Do. 2nd		7/6 13/3
Other qualities—		6/0 7/3
Cedar, Cuba, ft.		/4 /4½
Honduras, &c.		/3½ /4½
Mahogany, Cuba		/5 /6½
St. Domingo, cargo av.		/4½ 0/1/3
Mexican, do. do.		/3½ /4
Tobasco, do. do.		/4 /6½
Honduras, do.		/4 /6
Box, Turkey, ton		4/0/0 15/0/0
Rose, Rio		7/0/0 14/0/0
Bahia		6/0 0 12/0/0
Satin, St. Doming.		o/o/5 o/1/0

TIMBER (*continued*).

Satin, Porto Rico		o/o/6 o/1/6
Walnut, Italian ..		o/-/3 o/o/7

METALS.

Iron—Pig, in Scotland	ton	2/6/5 0/0/0
Bar, Welsh, in London		5/15/0 5/17/6
Do. do. at works in Wales		5/10/0 5/12/6
Do. Staffordshire, in London		6/5/0 7/10/0
COPPER—British cake and ingot		56/5/0 56/15/0
Best selected ..		57/5/0 57/15/0
Sheets, strong..		62/0/0 63/0/0
Chili bars		52/11/0 0/0/0
YELLOW MTL. lb.		5d. 5½d.
LEAD—Pig		
Spanish	ton	13/10/0 0/0/0
English com. bands		13/15/0 0/0/0
Sheet, English 6 lbs. per sq. ft. and upwards ..		14/15/0 c/o/o
Pipe		15/5/0 0/0/0
ZINC—English sheet	ton	21/10/0 0/0/0
Vieille Montagne		22/0/0 0/0/0
Spelter		18/17/6 19/0/0
TIN—Straits		65/13/0 0/0/0
Australian		66/5/0 66/15/0
English Ingots..		68/5/0 69/0/0
Banca		61/0/0 0/0/0
Billiton		59/15/0 60/0/0

OILS.

Linseed	ton	16/17/6 0/0/0
Cocoanut, Cochin		27/15/0 c/o/o
Do. Ceylon		22/0/0 0/0/0
Palm, Lagos		21/15/0 0/0/0
Rapeseed, English pale		27/10/0 0/0/0
Do. Brown		26/0/0 c/o/o
Cottonseed ref.		14/5/0 15/5/0
Oleine		13/10/0 14/10/0
Lubricating U.S.		o/5/3 o/7/6
Do. Black		o/5/0 o/6/6
TAR—Stockholm	barrel	1/5/0 0/0/0
Archangel		o/12/6 0/0/0
Turpentine		27/c/o o o/o

TENDERS.

[Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursdays.* N.B.—We cannot publish Tenders unless authenticated by the name and address of the sender; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is given, nor any list in which the lowest Tender is under £100, unless in some exceptional cases and for special reasons.]

ABERGAVENNY.—For the erection of a house, near Coldbrook. Mr. B. J. Francis, architect, Abergavenny. Quantities by architect:—

T. T. Foster	£329	Sier & Denman	£295
C. Howard	325	Thomas & Sons (accepted)	290

[All of Abergavenny.]

BLETCHINGLEY.—Accepted for additions to workhouse, Bletchingley, Surrey. Mr. Fredk. Hilliff, architect, Caterham. Quantities by Mr. G. H. Chapel:—

F. G. Minter, Westminster	£15,587

CARLETON (Yorks.).—For the erection of ten dwelling-houses at Carleton, Pontefract, for the Carleton Coal and Brick Company. Messrs. Greaves & Sidebottom, C.E., Ropergate-chambers, Pontefract:—

B. Wormald	£1,428
Wilson Dix:n	1,325
Beilby & West, Pontefract (accepted)	1,310
Six Lowest Trades	1,429

CHADWELL-HEATH.—For Contract No. 3, superstructure of lunatic asylum, Chadwell Heath, Essex, for the County Borough of West Ham. Mr. Lewis Angell, Architect to the Corporation:—

Gregar & Son	£247,720	Chessum & Son	£224,482
Patman & Fotheringham	235,000	Leslie & Co.	209,531
Shillitoe & Sons	226,964	Pattinson & Sons, Ruskington (accepted)	198,211

DEVONPORT.—For structural alterations to "The Wellington," William-street, for Mr. T. H. Bryant. Mr. Robt. H. B. Neal, architect, Central Exchange, Plymouth:—

J. P. Berry	£1,662 0	F. C. Ambrose	£1,467 10
J. Goad & Co.	1,535 0	J. H. Blackhall	1,451 0
G. B. Turpin	1,495 0	H. Full	1,349 10
A. R. Lethbridge & Son	1,468 0	J. H. Palmer (accepted subject to revision)	1,233 0

ECKINGTON (near Sheffield).—For additions to house, &c., for the Eckington and Mosborough Gas Company, Limited. Messrs. Fisher & Sons, architects, Eckington, Sheffield. Quantities by the architects:—

J. H. Moorwood	£269 0	C. Levick	£255 0
Kirkby & Drabble	263 0	T. Taylor, Eckington*	252 0
J. Fidler	260 0	W. G. Swann	231 5

* Accepted.

HADLEY (Herts).—For the erection of three cottages for Miss Paget. Mr. G. Walter Davis, surveyor, 61 and 62, Chancery-lane, W.C. Quantities by Mr. E. A. V. Garnham, 34, Great James-street:—

James Ellwood	£1,288	H. Harrisson, Hadley Green (accepted)	£1,154

HARWICH.—Accepted for the supply and erection complete of cast iron tank to hold about 275,000 gallons, including sub- and superstructure of steel stanchions, girders, and roofing, &c., for the Tendring Hundred Waterworks Company, Harwich:—

Peirson & Co., St. Dunstan's-hill, London, E.C.	£2,182 12 6

KINGS LYNN (Norfolk).—For rebuilding business premises at High-street and Union-lane, for Messrs. Jermyn & Sons and Messrs. Jermyn & Perry. Mr H. J. Green, architect, Norwich:—

J. S. Smith	£9,042 5 0	P. Banyard	£8,524 14 1
R. Dye	8,996 0 0	Kerridge & Shaw, Cambridge*	8,373 0 0
R. M. Parkinson	8,900 0 0	Bardell Bros.†	8,189 0 0
J. Youngs & Son	8,635 0 0		

* Accepted conditionally.
† Too late.

LEEDS.—For the erection of two houses, Victoria Park Estate, Bramley. Mr. H. Swanwick, architect, 101, Burley Lodge-road, Leeds:—

Bricklaying and Masonry.—W. H. Nichols, Wortley, Leeds	£395 0 0
Carpentry and Joinery.—Irving & Bristow, Leeds	284 19 4
Plumbing and Glazing.—Story & Co., Leeds	52 12 0
Plastering.—J. H. Brook, Armley, Leeds	50 11 0
Slating.—John Atkinson & Son, Leeds	38 0 0
Total	£861 2 4

LONDON.—For laundry apparatus and machinery at the Infirmary, St. John's Hill, New Wandsworth, S.W., for the Guardians of the Poor of the Wandsworth and Clapham Union. Mr. T. W. Aldwinckle, architect:—

J. & F. May	£2,700 0	Fraser & Fraser, Ltd.*	£2,494 10
H. F. Joel & Son, and T. Potter & Sons, Ltd.	2,639 0	Z. D. Berry & Sons (withdrawn)	2,100 0

* Accepted.

LONDON.—For pulling down and rebuilding 50, Rupert-street, Haymarket. Messrs. Chambers & Dewes, architects, 4, Bloomsbury-place, W.C.:—

Dove Bros.	£2,195	Whitehead	£2,125
Anley	2,162	Perkins	2,119
Lathey Bros.	2,139	F. G. Minter (accepted)	2,100

LONDON.—For fireproof staircase, for Mr. J. Davis, 62 and 63, High-street, E. Messrs. Wigg, Oliver, & Hudson, architects:—

Sparks	£1,281 0	Weston	£792 10
Eaton	1,236 0	F. G. Minter (accepted)	736 0

LONDON.—For rebuilding the "Princess Victoria," Uxbridge-road. Mr. W. M. Brutton, architect. Quantities by Mr. G. Silvester:—

W. Rowe	£8,723	Hooper & Sons	£7,603
Steven Bros.	8,158	Pritchard & Renwick	7,460
Tyreman	8,153	Courtney & Fairburn	7,379
Holloway	7,786	F. G. Minter	7,288
Hopkins	7,733		

LONDON.—For work in foundations at the Horniman's Museum, No. 100, London-road, Forest Hill, S.E., for Mr. F. J. Horniman. Mr. C. Harrison Townsend, architect. Quantities by Messrs. C. John Mann & Son:—

Higgs & Hill	£3,884	J. & S. Bowyer	£3,484
J. O. Richardson	3 658	J. Smith & Sons	3,477
Foster & Dicksee	3,595	Colls & Sons	3,470
J. Mitchell	3 592		

LONDON.—For the erection of four shops in High-street, Harlesden, N.W., for Mr. F. W. Sanderson. Messrs. Saville & Martin, architects. Quantities supplied:—

J. O. Richardson	£8,523	Burman & Sons	£7,397
Shurmur & Co.	8,450	W. D. Palmer & Co.	7,350
Patman & Fotheringham.	8,231	Peacock Bros.	7,180
T. E. Mitchell	7,464		

LONDON.—For the erection of Mayes Hall, Mayes-road, Wood Green, N., for Mr. C. Russell Hurditch. Mr. J. K. Manning, architect. Quantities by the architect:—

F. Voller	£2,776 0	F. & H. F. Higgs	£2,520 0
Wilmot & Sons	2,763 0	J. Pocock	2,514 13
J. O Richardson	2,640 0	Holliday & Greenwood	2,408 0
Batley, Sons, & Holness	2,604 0	W. Rubardt & Son	2,320 0

LONDON.—For erecting a bakery at New Brompton, for the New Brompton Economical Industrial & Provident Society, Ltd. Mr. Ernest J. Hammond, architect and surveyor, New Brompton, Kent:—

Thos. Cornelius	£9,630 0 0	H. E. Phillips	£7,960 0 0
C. Gray Hill	9,200 0 0	E. W. Fuley	7,900 0 0
General Builders' Co-op. Soc., Ltd.	8,700 0 0	J. Saunders	7,099 14 1
W. C. Snow	8,590 0 0	J. H. Harris, Chatham (accepted)	6,650 0 0

LONDON.—For additions to factory premises, Carpenter's-road, Stratford, Essex, for Messrs. A. Boake Roberts & Co., Limited. Messrs. Fletcher & Migotti, architects. Quantities by the architects:—

West	£3 600	Dabbs	£3.346
Harris & Wardrop	3.573	Courtney & Fairbairn	3.255
Nightingale	3.533	S. J. Scott (accepted)	3.239
McCormick	3.468		

LONDON.—For making alterations, repairing, and redecorating the mansion No. 52, Grosvenor-street, Grosvenor-square, W., for Mr. William Tebb. Mr. Philip A. Todd, architect, 12, Regent-street, S.W.:—

W. H. Lascelles & Co.	£2.871	Edwards & Medway	£2,525
W. H. Kelland	2,695	Thos. Gregory & Co.	2 490
Jos. Cannon	2,539	R. S. Buckeridge	2,270

LONDON.—For widening improvement at Tetherdown, Muswell-hill, N., for the Hornsey Urban District Council. Mr. E. J. Lovegrove, Engineer and Surveyor:—

I. A. Dunmore	£1,104 7 6	T. Adams	£884 12 9
Pedrette & Co.	953 1 6	F. A. Jackson & Sons Limited	810 15 10
W. Griffiths	942 15 1	Williamson & Son, Ltd., Green Lanes*	772 0 0
W. Walker	941 10 2		
G. Bell	894 0 0		

* Accepted.

LONDON.—For additions and fittings to London and South-Western Bank, Stepney. Mr. J. H. Bethell, architect, 31, Liverpool-street. Quantities by Mr. Henry Theobald, 48, Finsbury-pavement:—

J. H. Cocks	£2.550 0 0	Geo. Barker	£2,185 0 0
Hawkey & Oldman	2,367 0 0	E. Jackson*	1,822 16 8
Thorne	2,220 0 0		

* Accepted.

LONDON.—For distempering work, &c., at the Infirmary, Vallance-road, Whitechapel, for the Guardians:—

Jones	£788 0	A. Heard & Co.	£410 0
Woollaston	700 0	Malins	406 0
Harris	679 0	Smith	397 10
Grant	550 0	J. Haydon	379 10
Young	475 0	Lewis	378 0
Kiddle	446 0	Mills*	293 0
Vigor	429 0	Eady	251 0
Rogers	422 0		

* Accepted.

LONDON.—Accepted for alterations and additions to "The Duke of Norfolk" public-house, Westbourne-grove, W., for Messrs. Martin & Harwood. Mr. T. Wilson, architect, 34, New Bridge-street, E.C.:—

J. & W. Taylor £1,724

LONDON.—For alterations and repairs to No. 10, Russell-square, W.C., from drawings and specification prepared by Mr. W. Ernest Hazell, 23, Moorgate-street, E.C.:—

Stephen Bros.	£1,194	Worsley & Co.	£1,079
R. Bristow & Sons	1,133	C. W. Patten	957

MAIDSTONE.—For new store, &c., Waterside, Maidstone, for Messrs. Wakeley Bros. Mr. Simeon Hunt, architect, Brighton. Quantities by the architect:—

	New Store.	Stable, &c.	Sundries to old parts.	Total.
Cox Bros.	£2,885 0	£493	£32 0 0	£3 410
Thomas Elmore	2,986 0	518	60 0 0	3.564
W. J. Logan	2,753 16	497	28 15 3	3,279
Wallis & Sons	3,823 0	500	60 0 0	3,383
Wood & Sons	2,987 0	516	66 0 0	3.569
C. Skinner	—	—	—	3.698

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NEW SOUTHGATE.—For the erection of two semi-detached houses in the Limes Avenue, from drawings and specification prepared by Messrs. G. R. Tasker & Sons, surveyors, 38, John-street, Bedford-row, W.C.:—

F. Bull	£1,275	B. Jackson	£1,012
G. Life	1,250	R. Bristow & Sons	982

PLYMOUTH.—For the re-erection of the business premises, 82, Union-street, Stonehouse, for the lessor. Mr. Robert H. B. Nea), architect, Central Exchange, Plymouth:—

F. C. Ambrose	£1,851 2	J. Goad & Co.	£1,720 0
J. H. Blackhall	1 742 0	J. H. Palmer	1,656 0
A. R. Lethbridge & Son	1,725 0	H. Full*	1,323 6

* Accepted.

[All of Plymouth].

SULLY (Barry Dock).—For the formation of new roads and drainage works, for the Sully Property Company, Limited. Messrs. Veall & Sant, architects, Cardiff:—

C. Gardner	£1,044	E. H. Page	£838
Frank Ashley	1,032	Baines, Chaplin & Co.	837
Jenkin Brock	949	Mackay & Davies, Cardiff*	699
Geo. Rutter	907		

* Accepted.

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E. Flood	161 0	T. Cruwys*	134 0
W. R. & A. Hide	150 10	F. G. Minter	107 0

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Stevens Bros.	£626 10	Marchant & Hirst	£548 0
J. Grover & Son	594 0	W. Silk & Son*	545 0
T. Cruwys	571 0		

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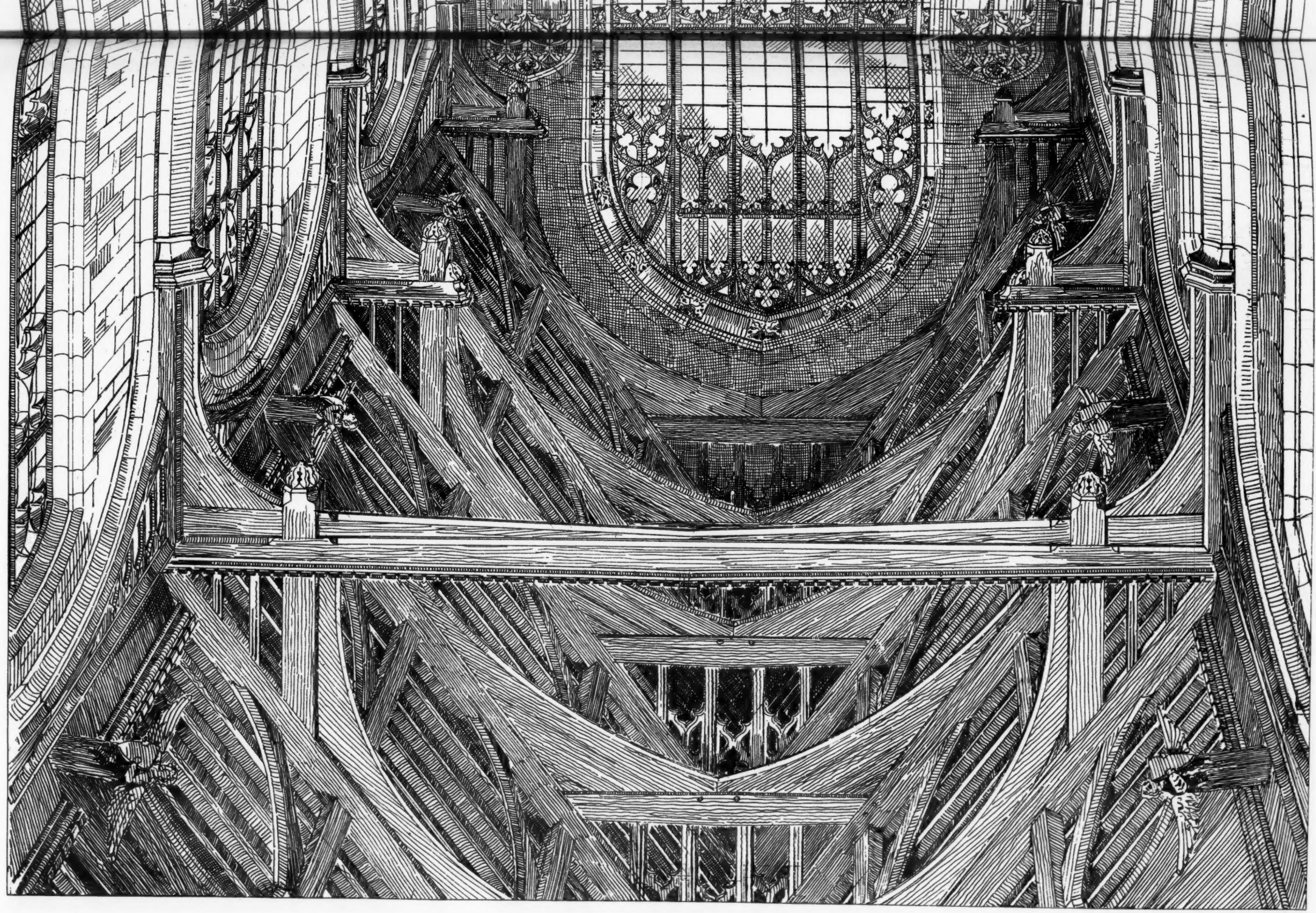

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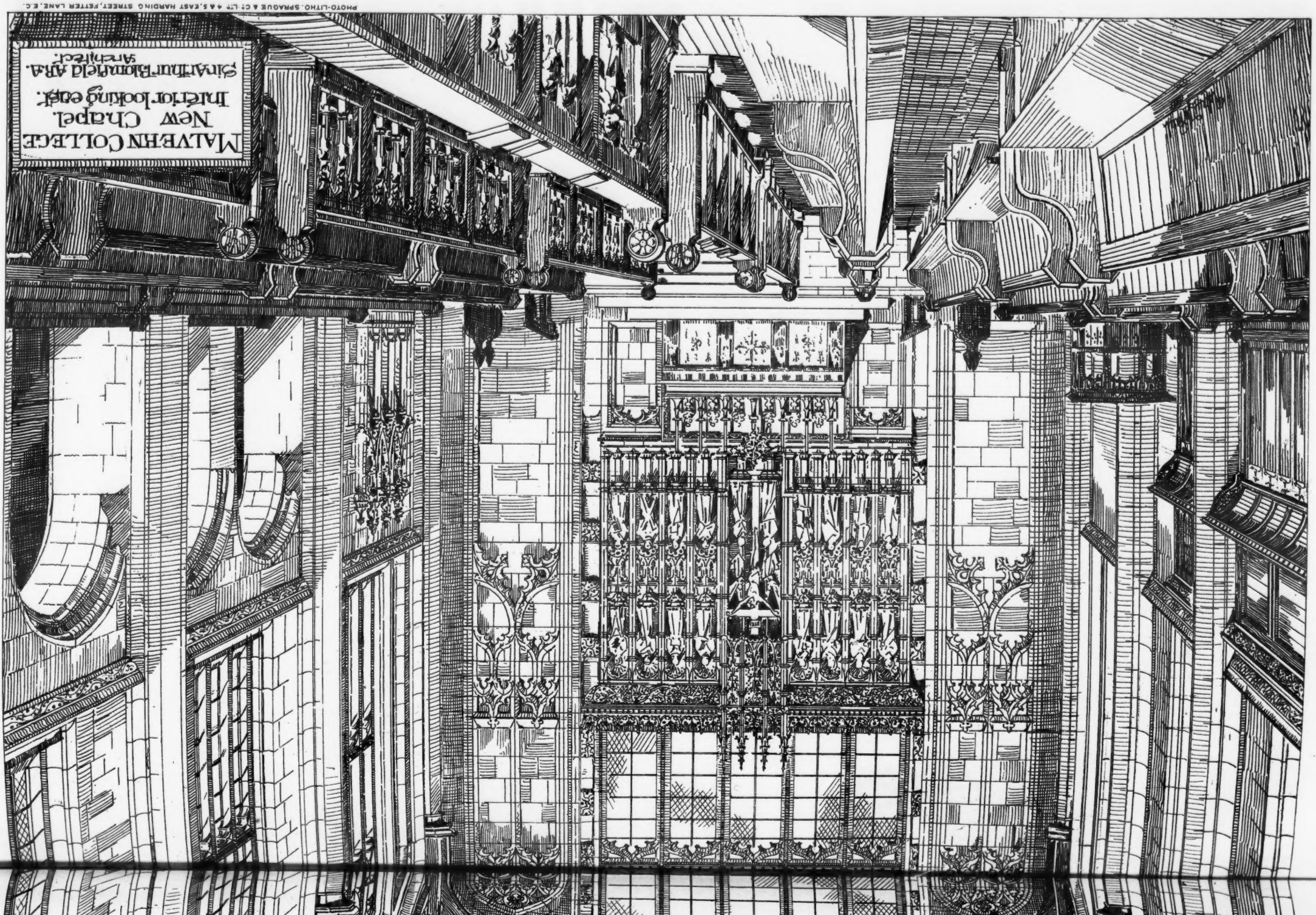

MALVERN COLLEGE.
New Chapel.
Interior looking east.
Sir Arthur Blomfield A.R.A.
Architect.

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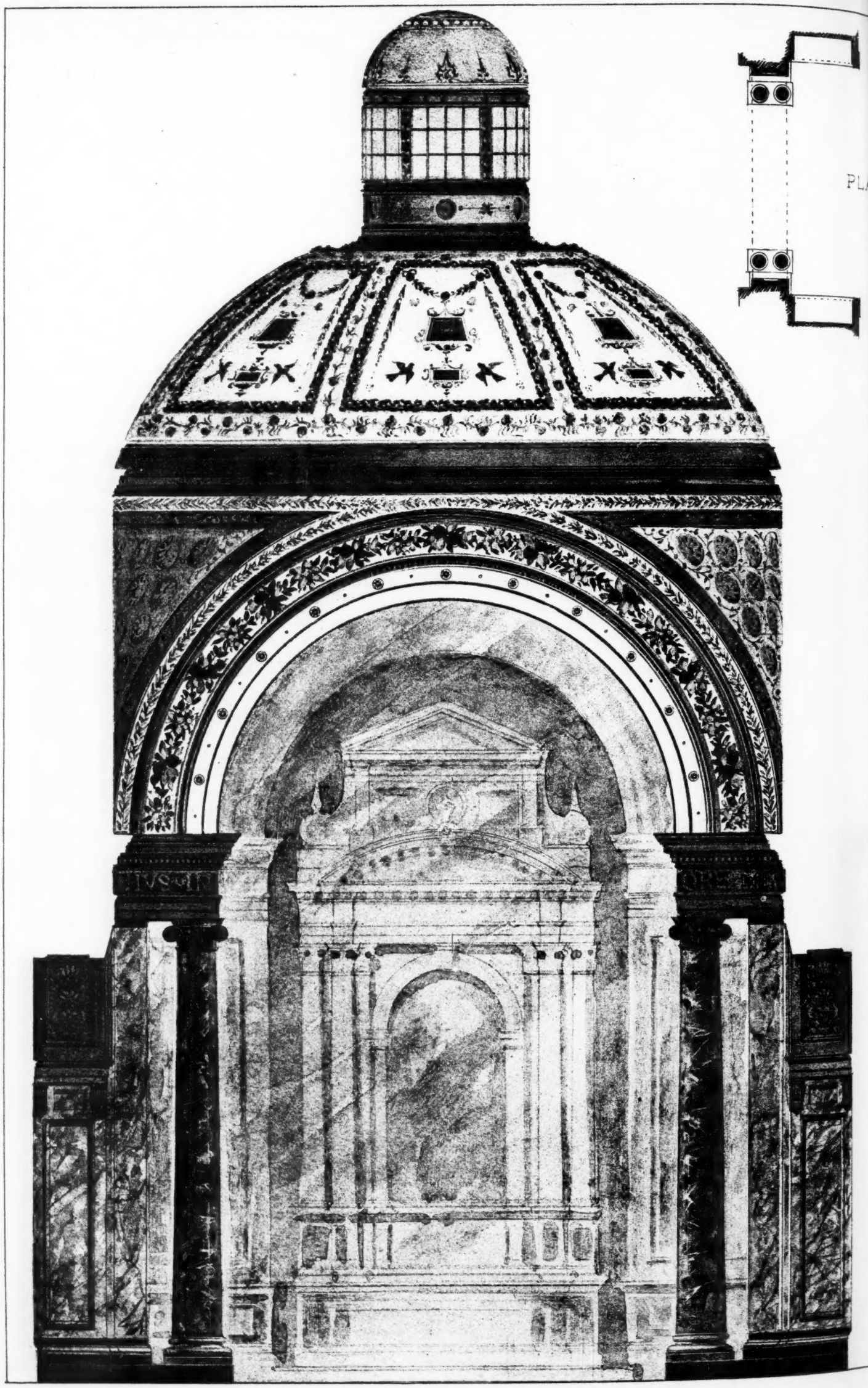

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